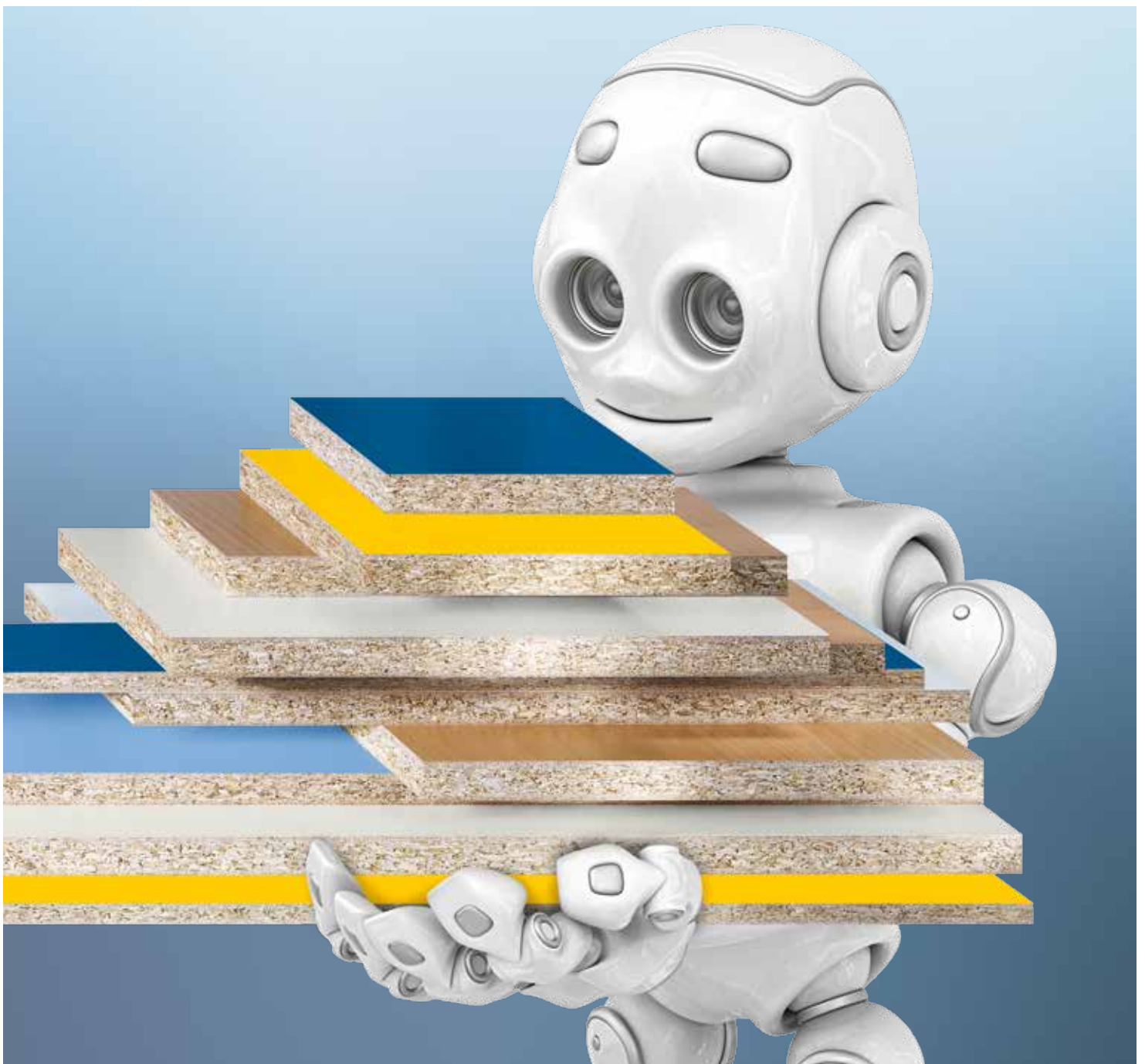


HPS 320 flexTec
The panel dividing saw for
batch size 1 cutting



A world first



HPS 320 flexTec – **YOUR SOLUTION** for individual cutting on a large scale

With HPS 320 flexTec, HOMAG revolutionizes cutting in batch size 1 production and allows highly flexible order-based or customer-related production. The innovative cutting cell is designed specifically for processing single panels and completely redefines the flow of parts – whether as a stand-alone solution or interlinked. The machine concept allows fully automated processes and unlimited recuts and can operate completely autonomously over long distances, depending on the version. This creates flexibility and gives your staff more time for other tasks. What began in 2005 with HBV robotic has now come to fruition with HPS 320 flexTec: entering into a new cutting era.

Tip: HPS 320 flexTec reveals its full performance capabilities combined with an automatic HOMAG storage system.

Find out more here: www.homag.com

VIDEO:

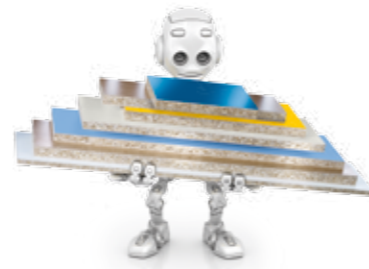


[HPS 320 flexTec](#)

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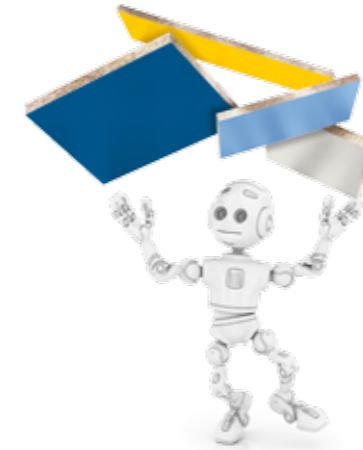
HPS 320 flexTec – one innovation, countless advantages



Fully automatic cutting in batch size 1

With HPS 320 flexTec, HOMAG has developed a cutting cell specially for cutting single panels – with highly efficient, fully automated processes including labeling

- Processes flow smoothly from A to Z
- Optimized for batch size 1 cutting processes in the trade sector or industry
- Unlimited recuts
- Fully automatic rip and cross cutting with just one saw
- No more manual panel handling, instead the option for unmanned operation – depending on the version
- The robot moves the panel using gentle vacuum technology
- Production interruptions are almost completely ruled out with the proven industrial robot (almost 100% availability)



Saves space, time, material and energy

The design makes the difference: HPS 320 flexTec is optimized down to the last detail for cutting single panels – from the overall design right down to the saw blade. This is what makes the machine so efficient and powerful in batch size 1 production.

- Requires less space, since only one saw body, one program fence, one machine table and one waste removal system are required
- This results in a high throughput over a small area, reduced maintenance costs and lower tool and energy costs
- Extra thin saw blades increase material yields and lower energy consumption at the same time
- Energy-saving and highly efficient due to a specially designed extraction system with innovative dustEx technology
- No time and effort required for manual handling
- Operating personnel are only responsible for monitoring the system
- Optimum process visualization
- Fully automatic offcuts handling by robot



Accurate, low-maintenance and high-availability operation

Thanks to the innovative yet proven robot technology, HPS 320 flexTec also sets totally new standards in terms of reliability and quality.

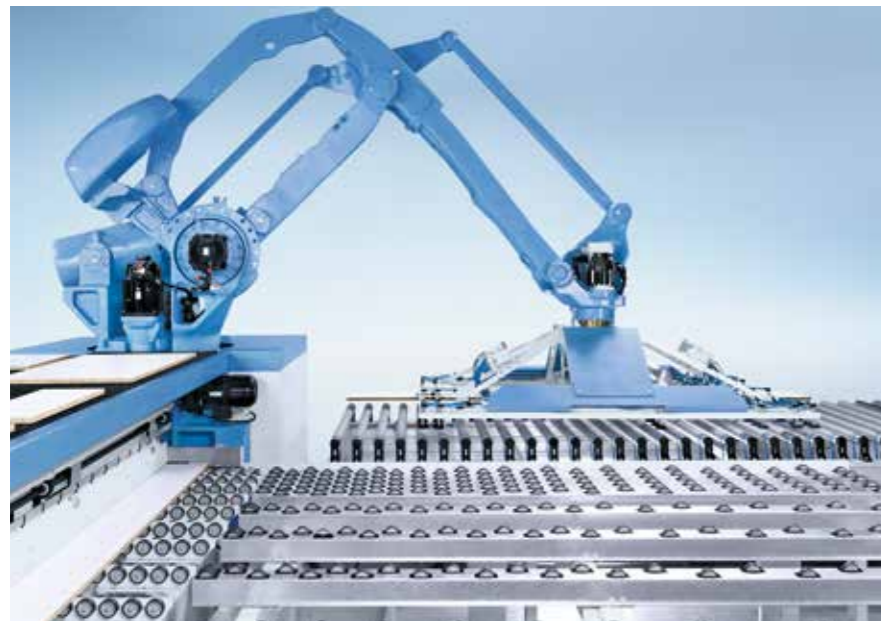
- High machine availability due to low maintenance requirements
- Extremely low error rate
- HOMAG simulation software ensures the performance can be computed accurately from the planning phase
- Attractive price/performance ratio
- Low life-cycle costs
- Significantly reduced unit costs in batch size 1 production
- Capacity: up 1500 parts per shift



Allows unlimited recuts and flexible cutting patterns

Flexibility is essential in single-panel cutting processes. The panel dividing professionals at HOMAG know this from countless discussions with customers and specifically aimed for this with the HPS 320 flexTec.

- Full flexibility in pattern amendment thanks to recut technology
- Head sections and therefore main parts in any length
- Powerful labeling with part- and order-specific information
- Outfeed of parts or their destacking on pallets can be coordinated with the following processing steps
- Cutting cells can be connected to automatic panel storage systems or integrated into HOMAG production lines
- Modular cutting cells, individually configurable. Combining several cutting cells, different material outfeed directions and different feed options is possible



Highlights at a glance

- As a stand-alone solution or interlinked
- Combined with automatic destacking, autonomous operation over longer distances is possible
- Unlimited recuts
- Highly flexible cutting pattern design
- Capacity: up to 1500 parts per shift
- Automatic labeling of parts
- Automatic handling of offcuts
- For trade and industry
- Special robotic expertise not required

This is what our customers have to say:

“We purchased the HPS 320 flexTec to further automate our operating processes and save resources. Now we are able to store and process over 400 different types of panels with only one employee, using the cutting cell and a HOMAG storage system. In short: For us, the HPS 320 flexTec is part of an overall system that ensures smooth processes from ordering through to the finished part.”

Phillip Schuon
Managing Director of Engineering and Purchasing, MS-SCHUON GmbH

“Every day we process around 1500 m² of panel material, and our motto is that nothing is impossible. This principle is the basis of our success – but it also requires a high level of flexibility and speed in production. When I saw the HPS 320 flexTec at LIGNA 2015, I was impressed. It was immediately clear to me that this saw was made for us. The HPS 320 flexTec helps us to cope with the demands of the future.”

Stefan Voit
Owner and Managing Director, Voit GmbH

“We decided on this system because its cost-effectiveness is impressive. Flexibility, use of space, performance and waste have been all but solved with this concept. In conjunction with our two-storey panel storage system, we can handle the required variety very well with the HPS 320 flexTec. As a next step, we will optimize the destacking process. We will also consider a robot solution here.”

Max Heller
Managing Director, Schüller Möbelwerk KG

“The HPS 320 flexTec was installed at our company in December 2016. Installation and commissioning went smoothly; the employees in the cutting department are very satisfied with their 'new colleague'. As a company, we specialize in custom-designed kitchens. We have been handling batch size 1 production for a long time. The commissioning of the HPS 320 flexTec marks an important milestone in our new production concept. The system has fully met our expectations so far.”

Elko Beeg
Managing Director of Sachsenküchen, Hans-Joachim Ebert GmbH



Standard features



1 Robot with suction traverse

At the heart of the HPS 320 flexTec is a tried-and-tested industrial robot with a specially developed suction traverse. It is responsible for the handling of all the panels, strips and parts. Fully automatic, highly flexible, error-free and efficient.



2 Side machine table (active strip buffer)

The robot places the strips here. They are then automatically fed to the rear machine table. The side machine table can be connected to an additional table for extension as required.



3 Rear machine table

With integrated alignment function for longitudinal and transverse alignment (patent pending) and roller rails.



4 Program fences

Automatically positions the panels at the cutting line with robust clamps. The technology is consistently designed for single panels – for lasting exact positioning with minimal maintenance, careful handling of the material and maximum availability.



5 New side pressure device

In contrast to the usual situation with HOMAG saws, the HPS 320 flexTec works with a side pressure device that comes from above and can be moved separately. The system aligns the strips over the entire cutting length – also suitable for pressure-sensitive panels.



6 Extraction system

The cutting direction is towards the right-angled fence. This prevents the panels from slipping and at the same time guarantees optimal extraction, as dust and chips are directly captured via the right-angled fence, the pressure beam and a special channel in the saw carriage.



7 dustEx (patented)

The machine table is equipped with innovative dustEx combi-nozzles that guide dust and chips directly to the extraction system on the right-angled fence.



8 Ejecting device

Automatically pushes the cut parts from the cutting line to the front machine table and thus back into the work area of the robot. Waste is removed via the waste flap.



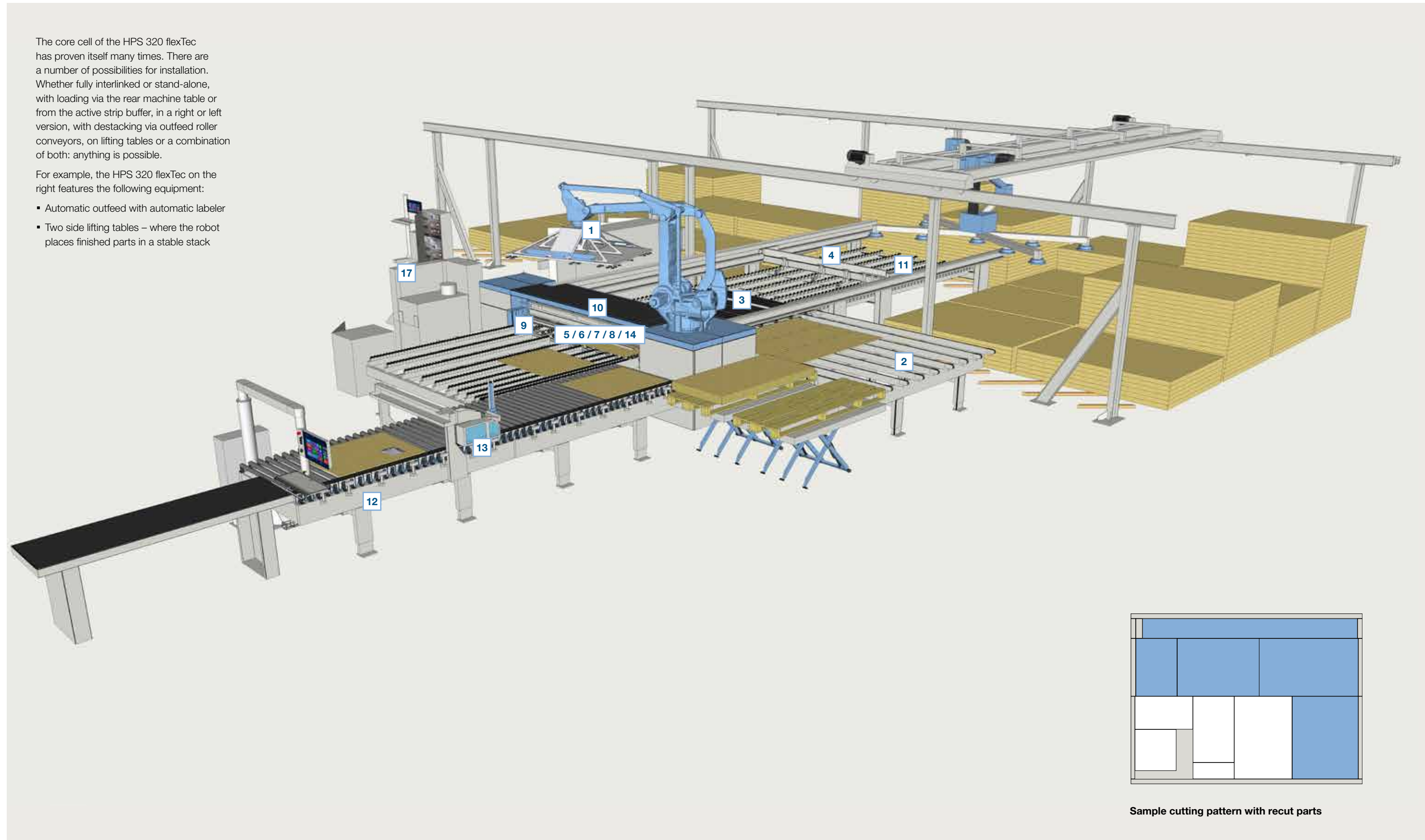
9 Waste removal

The waste flap opens and closes in the work cycle of the cutting cell. It is fully automated and software-controlled.



10 Parts buffer for recuts

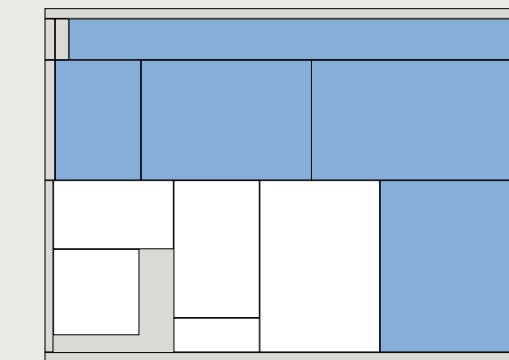
The system has a parts buffer directly above the pressure beam. The robot temporarily places parts here that are to be fed to the saw again (recuts).



The core cell of the HPS 320 flexTec has proven itself many times. There are a number of possibilities for installation. Whether fully interlinked or stand-alone, with loading via the rear machine table or from the active strip buffer, in a right or left version, with destacking via outfeed roller conveyors, on lifting tables or a combination of both: anything is possible.

For example, the HPS 320 flexTec on the right features the following equipment:

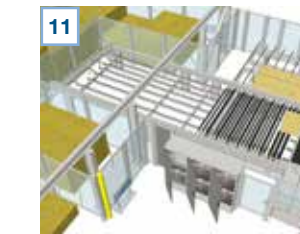
- Automatic outfeed with automatic labeler
- Two side lifting tables – where the robot places finished parts in a stable stack



Sample cutting pattern with recut parts

The figures show the technical principle to an extent, but not exactly the machine design described. For example, optional features may be pictured.

Optional features



11 Extended rear machine table

If the saw is fed from an automated store, the rear machine table may be extended. The advantage is that, if necessary, the store then already puts the next panel into place during the current cutting process without the saw having to stop.



12 Automatic outfeed

The robot automatically places all the finished parts on the outfeed motor-driven roller conveyors.



13 Automatic labeling

If the cutting cell has an automatic outfeed, it also needs a label printer for fully-automatic labeling. Each finished part is thereby provided with the information necessary for processing at subsequent stations directly at the outfeed. There is a choice of two types of printer each using labels in 120 mm x 80 mm format.



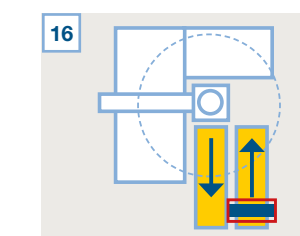
14 Labeling near pressure beam

The HOMAG pressure beam printer labels parts automatically – and directly where they are made. This creates ideal prerequisites for partially unmanned operation during the new lifting table destacking process, as the 76 mm x 76 mm labels contain all of the information required for subsequent processing. The label position may be selected as required.



15 Manual label printer

In addition to the automatic labeling solutions, HOMAG also offers a manual label printer for the HPS 320 flexTec.



16 Offcuts return

The HPS 320 flexTec independently returns so-called automatic offcuts back into the store. In contrast, manual offcuts are marked with a label and placed in a manual offcut store by the operator. As soon as this kind of offcut is needed again, the cutting cell requests the operator to feed it to the saw. The operator collects the desired part from the manual offcut store, scans its label and places the part on an offcut roller conveyor. Here, automatic part measurement checks whether the information on the label matches the real dimensions. If this is the case, the part is fed back into the robot's field of action by the offcut roller conveyor and processed.

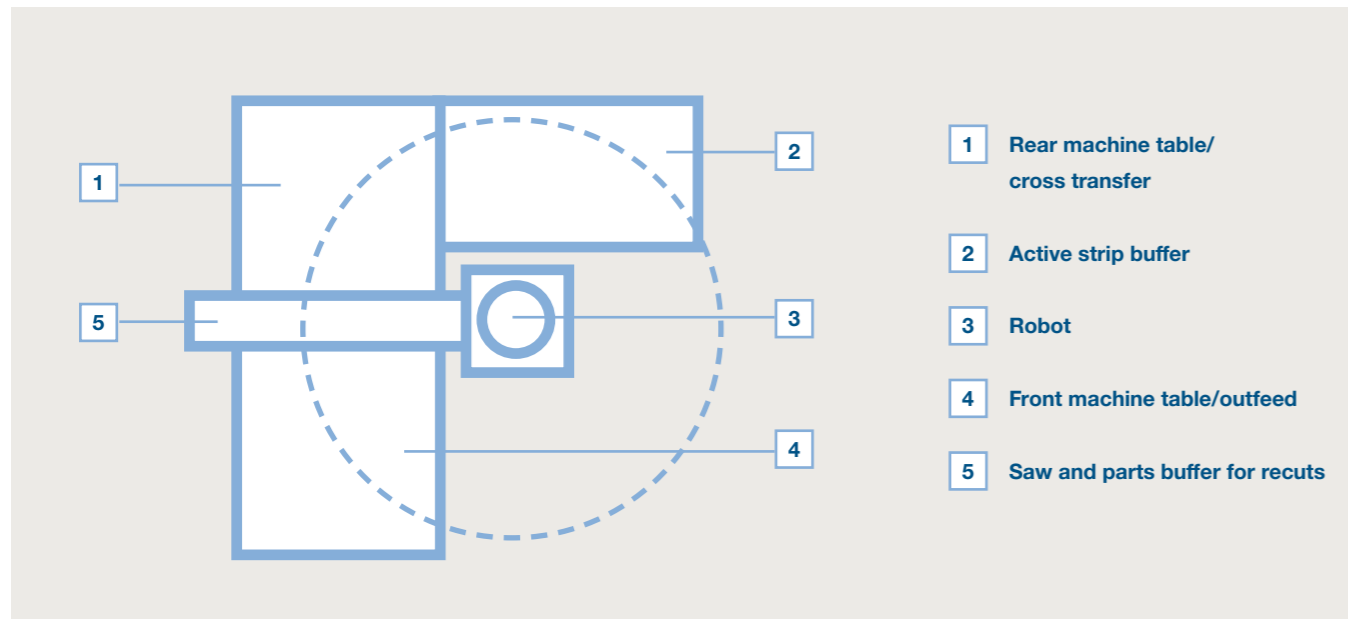


17 Waste chopper and elevating waste conveyor

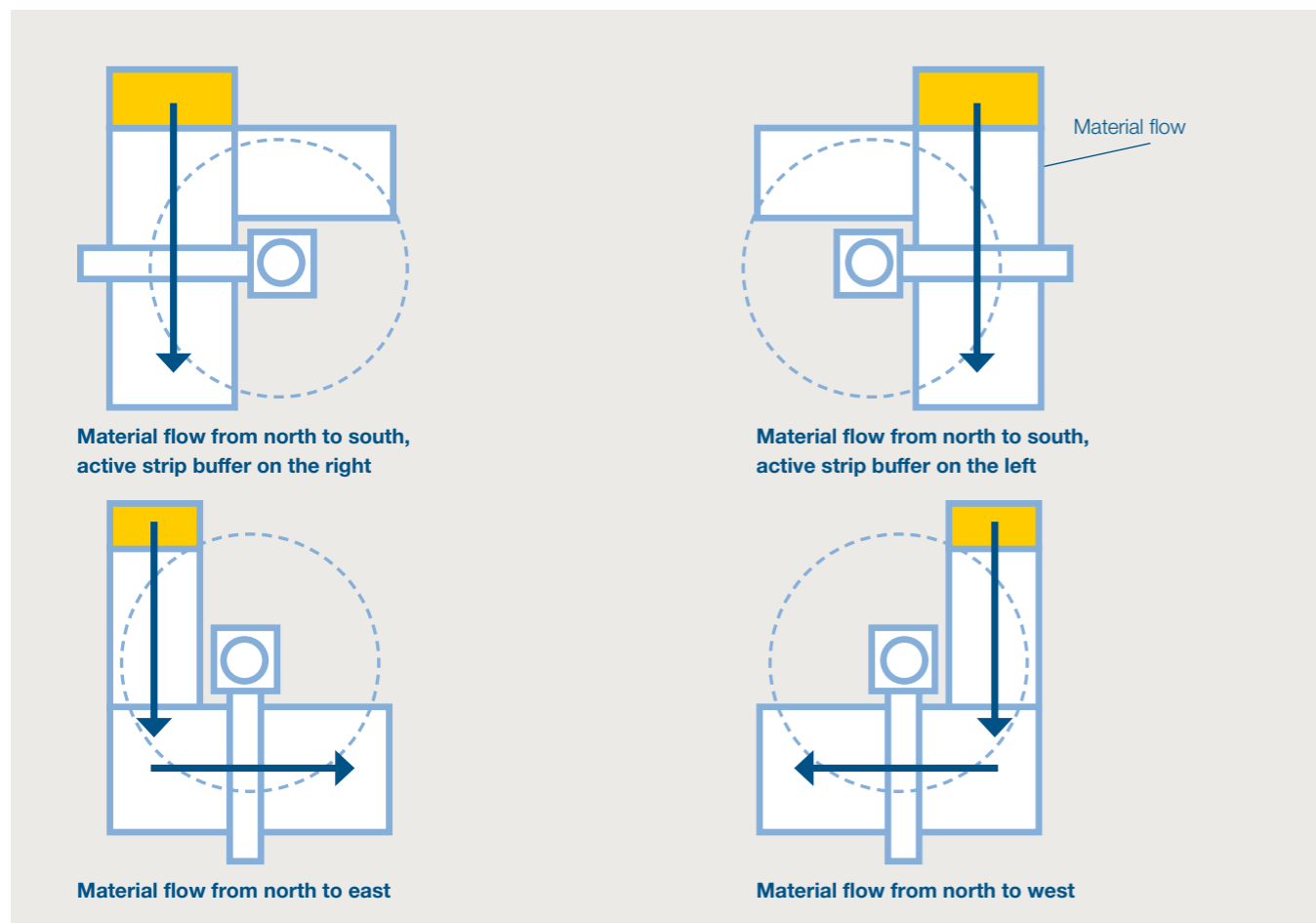
For smooth waste removal, a waste chopper and an elevating waste conveyor are available as options.

Installation variants at a glance

The basic machine



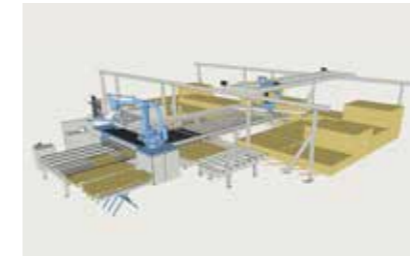
Installation variants for a demand-based feed



Additional equipment for individual destacking solutions

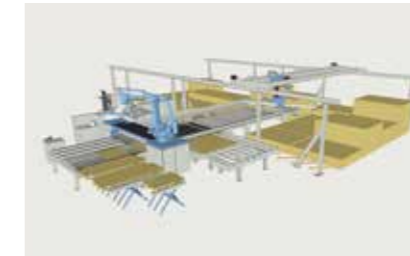
New: Automatic destacking to lifting tables

The lifting tables in the work area of the robot enable unmanned operation over long distances with the cutting cell.



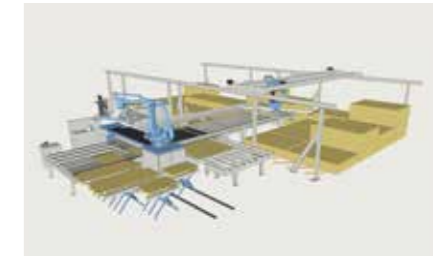
Variant 1

- Two long-part lifting tables



Variant 2

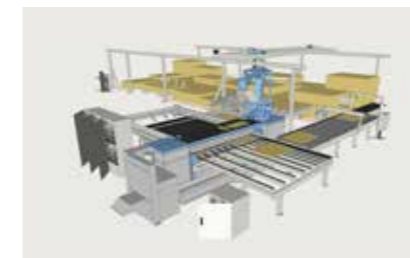
- Two long-part lifting tables with a small lifting table in addition



Variant 3

- Two long-part lifting tables in combination with two small lifting tables. One of these can be moved as needed

Automatic outfeed via roller conveyors



Variant 1

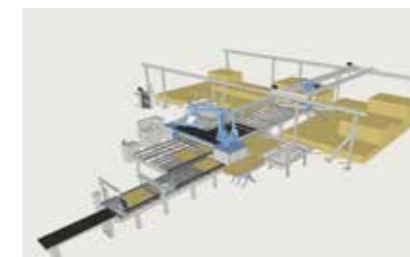
- Finished parts are transported at a 90° angle to the right and on mirrored versions to the left
- Fully automatic connection to subsequent machines possible



Variant 2

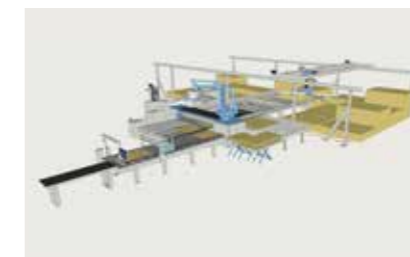
- The finished parts are transported forwards for destacking using an automatically driven outfeed roller conveyor
- Fully automatic connection to subsequent machines possible

New: Combinations of roller conveyors and lifting tables



Variant 1

- An outfeed roller conveyor with a lifting table

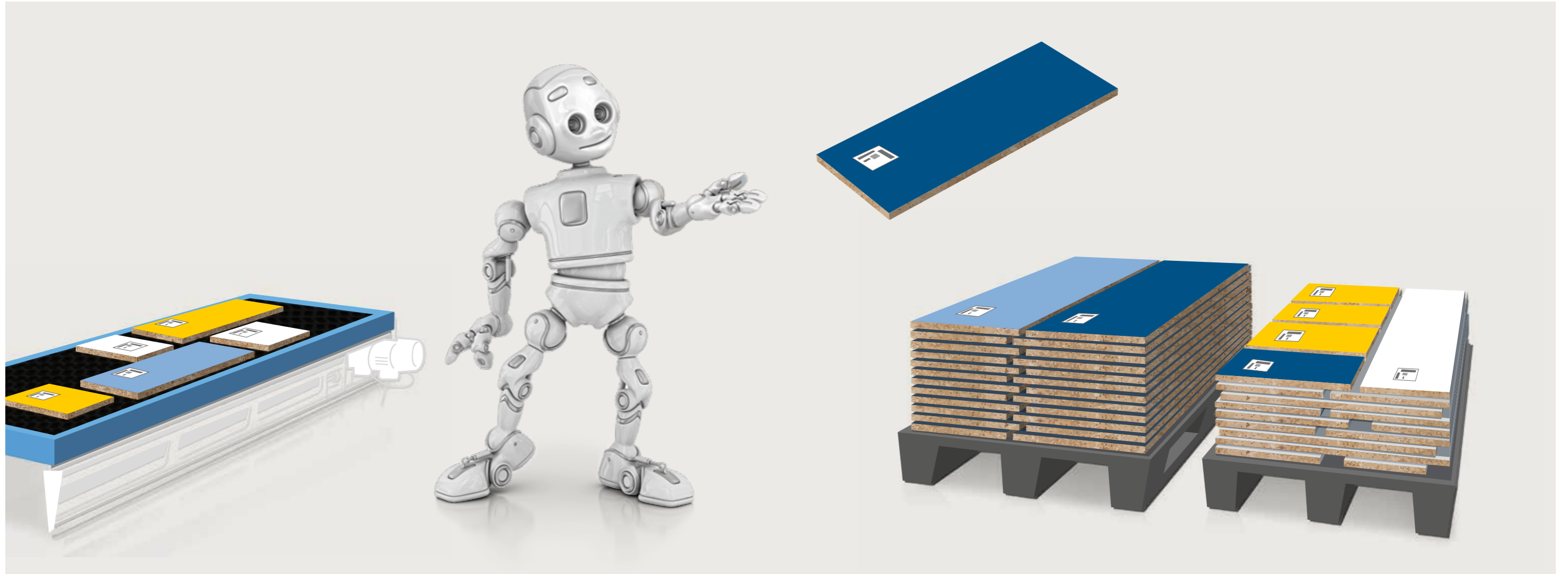


Variant 2

- An outfeed roller conveyor with two lifting tables

NEW: Destacking software and lifting table solutions for periodically unmanned operation

The panel dividing professionals from HOMAG have developed destacking software with a completely new algorithm. This, together with the robot and the lifting tables in the secure area of the system, enables the HPS 320 flexTec to operate unmanned over long distances. A revolution in panel dividing technology!



The operating principle: clever and highly automated

The finished parts exit the saw in the order they are cut. To obtain the optimum destacking order for stable stacking and subsequent processing, the HOMAG experts have developed a new algorithm. Equipped with its intelligence, the robot also uses the parts buffer when destacking. This allows the lifting tables to be used with a time delay and more intelligence than ever to form perfect stacks.

The cutting cell is equipped with a laser scanner. This measures the height of the stack of parts on the lifting tables in real time for optimum height positioning.

The advantage: operators are not required over long distances

Equipped with lifting tables in the robot's field of action, the HPS 320 flexTec can already work completely unmanned over long distances depending on the destacking variant.

The result: all-round efficiency

Thanks to its destacking software and special lifting tables in the robot's field of action, the HPS 320 flexTec works extremely efficiently and improves batch size 1 production beyond the cutting process.

- The robot can perform destacking according to an optimization strategy based on either destacking location or downstream processes
- The robot always tries to use the maximum stack height

- It forms absolutely stable and also fewer stacks than is normal when manually destacking
- Actions by machine operators are rarely required, and no longer required at all over long distances

This reduces the space required for handling tasks. All this adds up to a rapid return on investment.

TECHNICAL DATA*	
Model	HPS 320 flexTec
Saw blade projection (mm)	58
Cutting length (mm)	3200/4300
Panel dimensions (mm)	3200 mm cutting length: max. 180 4300 mm cutting length: max. 250
Part size (mm)	max. 2800 x 1200 min. 240 X 80
Panel thickness (mm)	8-42
Weight of panels (kg)	max. for 3200 mm cutting length = 180 max. for 4300 mm cutting length = 250
Program fence speed (m/min)	up to 90
Saw carriage speed (m/min)	up to 150
Main saw motor (kW)	50 Hz: 6.5 60 Hz: 8.0
Scoring saw motor (kW)	1.1
Main saw blade (mm)	308 x 3.2 x 60
Scoring saw blade (mm)	220 x 3.2 - 4.0 x 45
Operating software	CADmatic PROFESSIONAL with powerTouch
Dust extraction values	Connection diameter: 180 mm Air velocity: 26 m/s Suction capacity: 2300 m ³ /h

* Based on standard features

HOMAG Plattenaufteiltechnik GmbH

Holzmastrasse 3
75365 Calw-Holzbronn
Germany
Tel. +49 7053 69-0
info-holzbronn@homag.com
www.homag.com



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