

Flexibility. Functionality. Reliability.

HE HOMAG

Robot Integration

FEEDBOT D-300 and DRILLTEQ V-500

YOUR SOLUTION







Robot Integration – FEEDBOT D-300 with vertical CNC processing center DRILLTEQ V-500

The manufacturing cell with robot for automatic material handling

Availability of nearly 100 %, high repeatability and pinpoint workpiece handling – robots are reliable partners and automatically increase the efficiency of production. The reliable workpiece supply of the robot system turns every CNC machine into a high-performance center and thus an optimum production cell in wood and furniture production.

YOUR SOLUTION

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Advantages of automatic material handling with robot support

FEEDBOT D-300 on DRILLTEQ V-500 vertical CNC processing center.
Safe, precise, automatic handling of workpieces for more efficient production.



A CNC processing center with robot support forms one of the smallest possible cells of the furniture production. In this combination, the FEEDBOT increases your overall productivity. It does not have to take a break, can work around the clock on the shop floor and ensures consistently high quality. Small and medium-sized companies save a lot of

time by using the FEEDBOT D-300 and reduce the workload for their staff. The resulting flexible manpower organization allows your workforce to be used more for value-added activities and production processes. The result is added value for your plant in terms of quality, availability and performance.



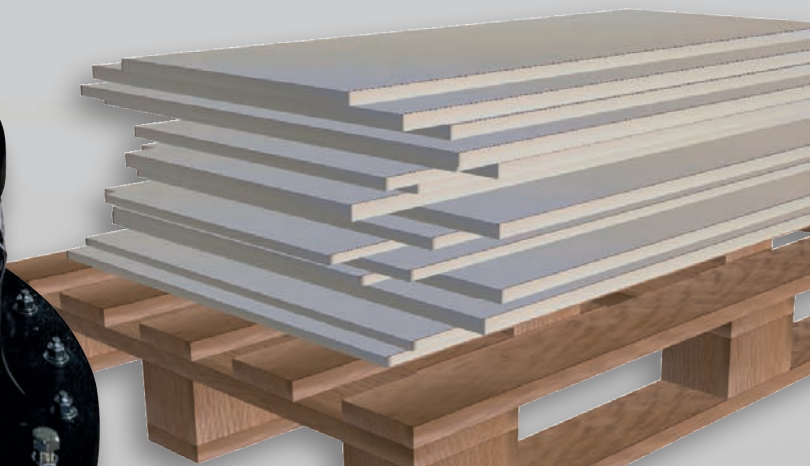
ADVANTAGES OF ROBOT INTEGRATION AT A GLANCE:

- **High availability –**
Machine running time can be extended to almost 100 %
- **Long lifetime –**
no need to search for new workers
- **Highly flexible production –**
No training of new processes necessary
- **Low maintenance operation –**
24/7 availability (no vacation, sickness, breaks)
- **High cleanliness and low noise**
- **Ergonomics friendly –**
Manual parts handling almost completely eliminated
- **Consistently high quality –**
No reduction / change due to change of workers



Your benefits during application with HOMAG:

- Everything from a single source from HOMAG (Liability and safety, CE, one contact, HOMAG service)
- Processing on both sides possible due to return conveyor at the drilling machine
- Robust suction technology and high-quality crosshead lead to high process reliability
- Sensitive contact with the CNC pins - thanks to the floating crosshead - ensures gentle operation
- Large workpiece variance
- Automatic setup of the cell (CNC and robot) as well as visualization in woodFlex
- Plausibility check: comparison of the data from the control to the actual part



Process Overview

Your production becomes more flexible with the support of the FEEDBOT D-300 and the firmly defined processes more flexible and more agile. Markings on workpieces and material

increase and for your employees fatiguing, uncomfortable tasks are carried out by the robot. Even small batch sizes can be produced without any problems.

Standard operation / normal mode

1 Raw parts are provided as stacks on pallets

The robot determines the position of the workpiece to be loaded by means of sensors.

The workpiece is separated from the stack by means of tilting incl. subsequent part validation.

2 The unmachined part will be inserted by the robot into the CNC machine

The workpiece is held by means of a compensating joint on the the robot gripper against the stop pin of the CNC machine.

Subsequently the CNC machining starts.

3 Removal of the finished parts

4 Manufactured parts are placed on the target stack.

The next workpiece will be measured and inserted into the machine.

Extension workflow through return conveyer

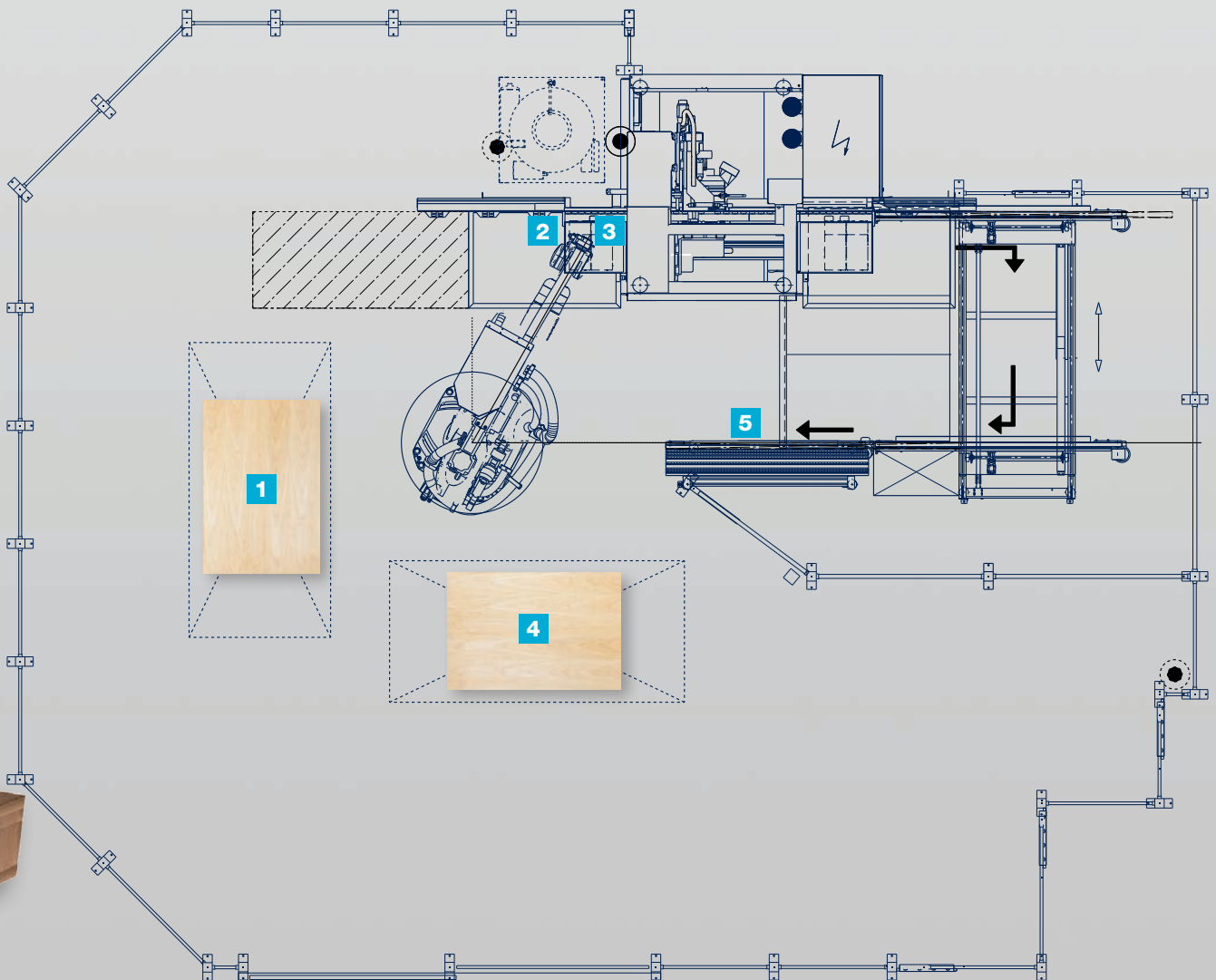
Option A

Workpieces from the return conveyer **5** can be fed again to the CNC **2** (2nd run, the part was turned over for machining on both sides).

After the second run through the CNC, parts are output to the return conveyer and finally placed on the target stack **4**.

Option B

Parts are transferred to the return conveyer **5** after the first pass through the CNC and then placed on the target stack **4**.



Machine monitoring with MachineBoard

With this app, you can always keep an eye on the FEEDBOT D-300 and DRILLTEQ V-500, even when you're not on site. Simply see the status and condition of the machines at a glance.



BENEFITS:

- Easy overview of all machines, location-independent
- Push notifications for alarms
- Always on time at the machine
- More flexibility in daily work
- More time for daily work

FUNCTIONS:

- Push notifications
- Machine data and status in real time
- Lists of errors, warnings, servicing and actions
- Display of remaining production time

WoodFlex visualization

This control system provides networking, has a modular design and is open for future requirements or expansions. woodFlex creates safety, optimizes processes and increases efficiency.



woodFlex

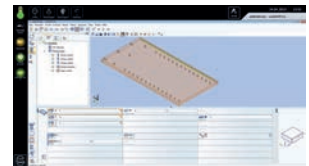
- Visualizes the cell in real time
- Connects the two machines into one cell
- Automatic setup of both machines



Control and operation

Operation

Via the HOMAG powerControl with powerTouch2.



Control

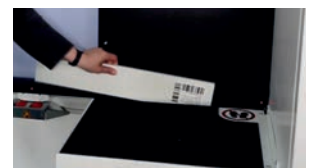
Via stacking lists or via a barcode (optional). For the application the cell control woodFlex is used. This enables automatic setup of both machines.



2 operating modes

Automatic (robot loads and unloads CNC).

Manual (robot deactivated, operator can run CNC autonomously).



Barcode reader

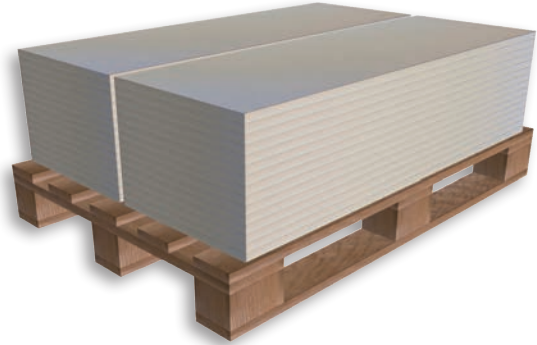
Workpieces can be identified via the label in batch size 1 operation. The barcode is applied lengthwise/crosswise centrally on the top of the blank.



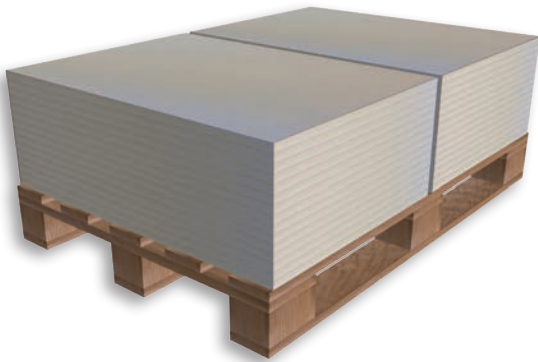
Stacking patterns and technical parameters



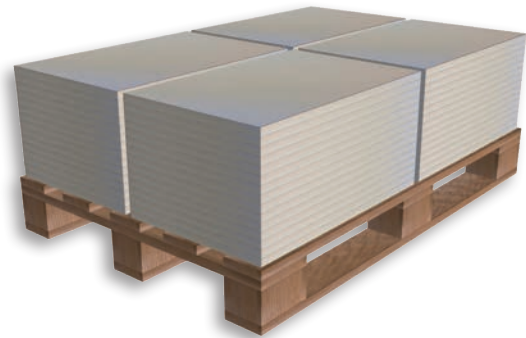
Stacking pattern 11: for batch size 1 and series parts



Stacking pattern 21: for series parts



Stacking pattern 112: for series parts



Stacking pattern 22: for series parts

These stacking patterns are the standard stacking patterns for the cell.

TECHNICAL PARAMETERS

Carrier material:

- Chipboard
- MDF
- HDF
- plywood, solid wood

Surfaces:

- Melamine
- Raw (carrier material does not soak through)
- Veneer
- Laminate
- No overlap (optional)

Special workpieces:

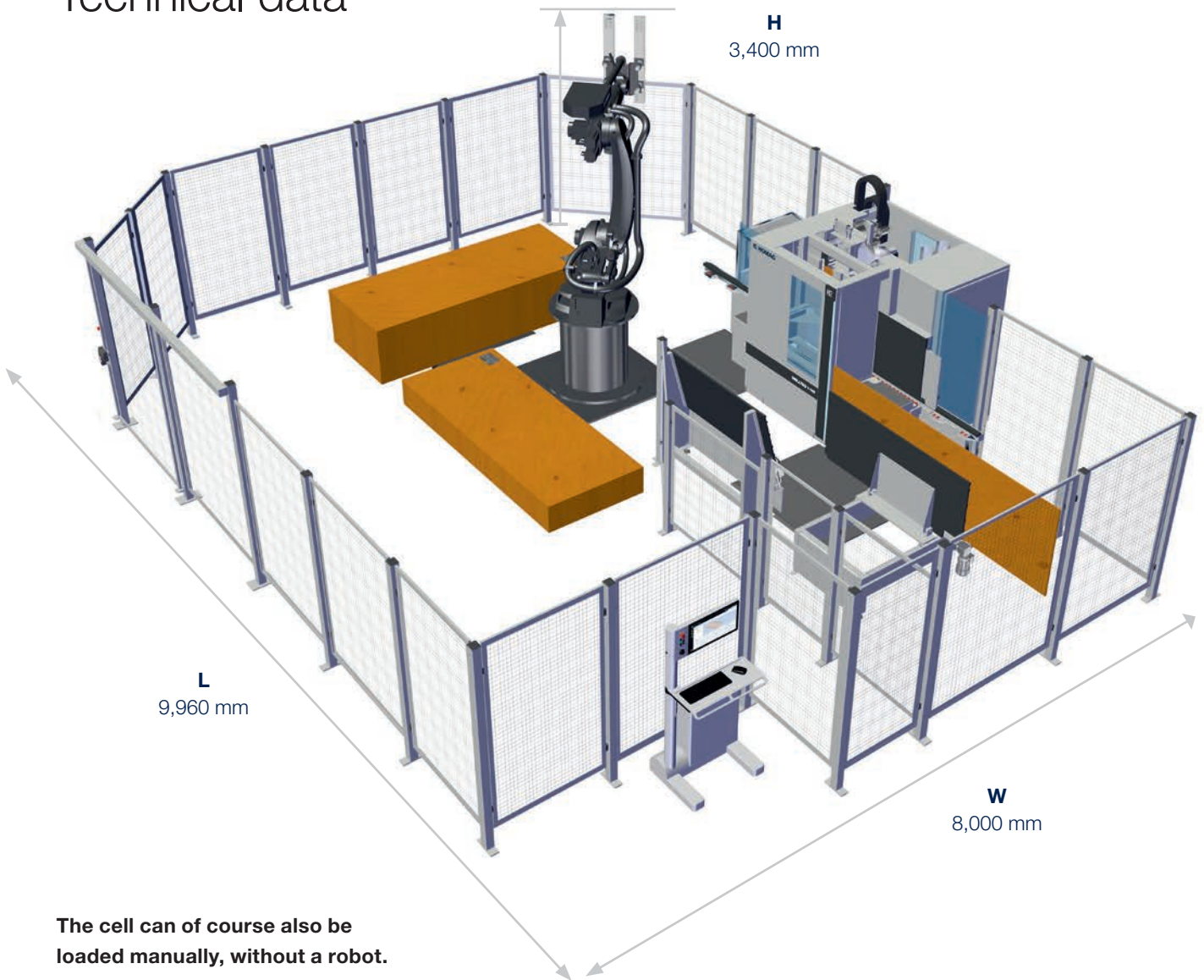
Highly structured or absorbent materials and workpieces with high adhesion must be requested separately in the engineering department.

Max. Stacking height:

1,500 mm incl. base frame



Technical data



The cell can of course also be loaded manually, without a robot.

TECHNICAL DATA

			DRILLTEQ V-500 with FEEDBOT D-300	DRILLTEQ V-500 with return conveyor (short version) and FEEDBOT D-300	DRILLTEQ V-500 with return conveyor (long version) and FEEDBOT D-300
Workpiece dimensions max. with manual feeding	L x W x H	mm	3,050 x 1,250 x 80	2,300 x 1,250 x 80	3,050 x 1,250 x 80
Workpiece dimensions min. with manual feeding	L x W x H	mm	200 x 50 x 8	350 x 60 x 8	350 x 60 x 8
Workpiece dimensions max. with feeding via FEEDBOT D-300	L x W x H	mm	3,050 x 1,200 x 60		
Workpiece dimensions min. with feeding via FEEDBOT D-300	L x W x H	mm	350 x 120 x 10		
Workpiece weight max.		kg	60		
Installation dimensions	L x W x H	mm	10,020 x 8,000 x 3,400	9,960 x 8,000 x 3,400	10,520 x 8,000 x 3,400

Easy to get. And easy to use.

tapio is the open wood industry ecosystem

This means that everyone involved in the wood industry can participate.
Because together with our business partners, we develop digital solutions for everyone.



Just have a try:

Free use of the MachineBoard app! Just register under tapio and “connect” the machine www.tapio.one. The complimentary usage is limited in time.

Apps that make working life easier.

tapio

Partner

DataSave

- Protects machine and configuration expertise
- Faster service for machine breakdowns
- Saves time when restarting production
- Saves on maintenance costs
- Automatic backups of several machines

ServiceBoard

- Create service cases quickly and easily and send them to the correct service partner
- Live video diagnostics to solve service cases with image support
- Video reduces the language and distance barriers
- Also works without a machine connection to tapio (and is therefore ideal for older machines)

MachineBoard

- Push notifications
- Machine data and status can be viewed from anywhere in real time
- Lists of errors, warnings, maintenance tasks and actions
- Displays the remaining time until the next intervention by the machine operator



Free demo for all tapio apps, no registration required. Simply download and test.

Currently available in the EU and Switzerland.

(Due to the fast pace of the IT-landscape, the compatibility to the tapio platform is warranted for five years.)

HC LIFE CYCLE SERVICES

Optimal service and individual consultations are included in the purchase of our machines. We support you with service innovations and products which are especially tailored to your requirements. With short response times and fast

customer solutions we guarantee consistently high availability and economical production – over the entire life cycle of your machine.



REMOTE SERVICE

- Hotline support via remote diagnosis by our trained experts regarding control, mechanics and process technology. Thus, more than 92% less on-site service required and consequently a faster solution for you!
- The ServiceBoard App helps to solve tasks in a fast, simple and concrete way. This is achieved by mobile live video diagnosis, automatic sending of service requests or the online spare parts catalog eParts.



SPARE PARTS SERVICE

- High spare parts availability and fast delivery.
- Ensuring quality by predefined spare parts and wear parts kits, comprising original spare parts.
- Identify and inquire for spare parts online under www.eParts.de 24/7, or buy even faster and more comfortably in the new HOMAG eShop (shop.homag.com).



MODERNIZATION

- Keep your machinery up to date and increase your productivity as well as your product quality, This is how you can meet tomorrow's requirements today!
- We support you with upgrades, modernization as well as individual consultancy and developments.



DIGITAL SERVICES

- serviceRemote – the new remote service solution of the future! Fast restart of production because the remote service employee has extensive access to relevant physical data.
- serviceAssist – provides help for self-help. The preventive solutions proposed in the new App are the combination of our experiences and existing machine data.



SOFTWARE

- Telephone support and consultancy through software support.
- Digitalization of your spare parts via 3D scanning saves time and money compared to new programming.
- Subsequent networking of your machinery with intelligent software solutions ranging from construction to production.



FIELD SERVICE

- Increased machine availability and product quality by certified service staff.
- Regular checks through maintenance/inspection guarantee the highest quality of your products.
- We offer you the highest availability of technicians in order to reduce downtimes in case of unpredictable troubles.



For you more than...

1,350

service employees worldwide

92 %

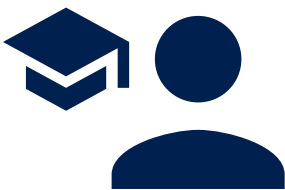
less on-site service thanks to successful remote diagnosis

5,000

customers in trainings / year

150,000

machines, all electronically documented in 28 different languages – in eParts



TRAINING

- Thanks to training perfectly suited to your requirements, your machine operators can optimally operate and maintain the HOMAG machines.
- The training also includes customer-specific training documents with exercises proven in practice.
- Online training and webinars. Learn without traveling, meet your trainer in the digital classroom.

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YOUR SOLUTION