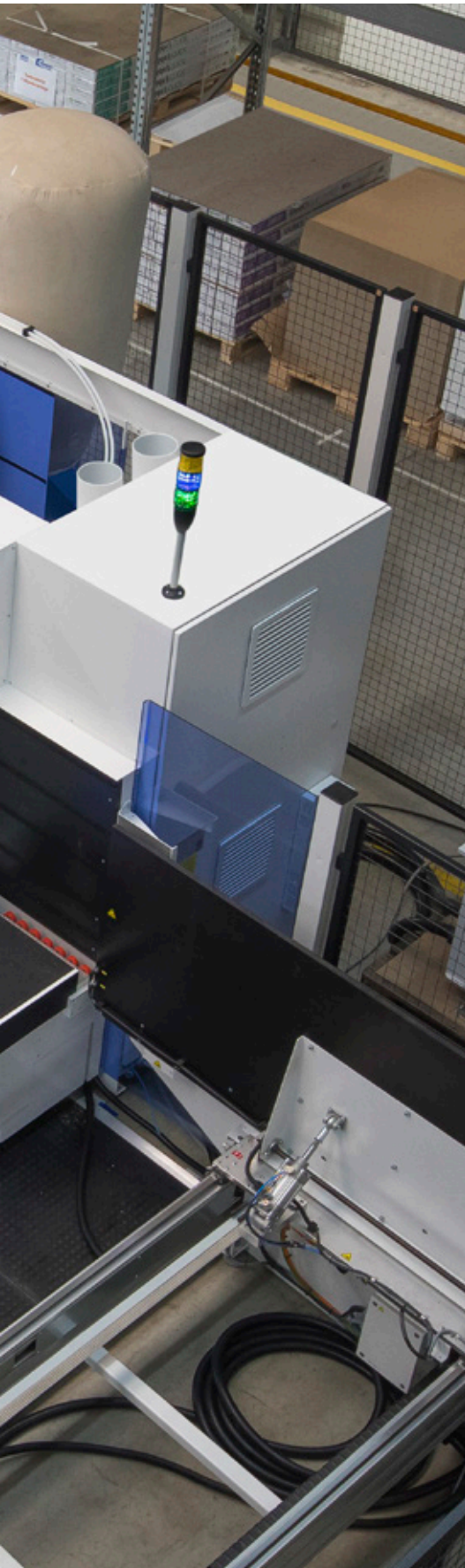# Networked production, simplified.

HOMAG

Your entry to a digital workshop
Providing solutions for any size.
Helping you to easily create more value.

YOUR SOLUTION

Making life easier with digital connection.

Digitalization, also known as digital transformation, is one of the issues driving the woodworking industry today. While some businesses are already working with tablet computers and apps, others still rely on handwritten order lists. Although every method has its advantages and disadvantages. The real challenge is finding the solution that is right for your business and helps you take the next step. In this brochure, we want to provide inspiration with various approaches and show some real-life solutions that will help you remain successful in future.

YOUR SOLUTION

CONTENTS

Why change anything?
Things are fine as they are

The world is moving faster and faster. The constant flow of new technology means that change is coming ever more rapidly. This is transforming our day-to-day lives, both at work and at home. If we want to remain successful long into the future, it is essential to keep pace with technological advances and keep a close eye on the trends that shape our industry. Once an advantage is lost, regaining it can often take a lot of time and effort. With this in mind, it is better to think about tomorrow today and choose the right solution to stay number one.

We can help you here with a variety of options and approaches. From hardware and software to service, connection solutions and digital assistants, we have exactly what you need.

A new way to boost your workshop
## Get more from your workshop

EVERY DAY, YOU NEED TO TAKE TIME FOR THINGS LIKE PLANNING, CHECKING, SEARCHING AND ADMINISTRATION BETWEEN THE INDIVIDUAL STAGES OF PRODUCTION. THESE AUXILIARY TASKS CAN TAKE UP WELL OVER 50 % OF YOUR PRODUCTION TIME.

This is where we come in. Our artificial intelligence can help you create more value and optimize your processes.

### FASTER PRODUCTION

PERFORMANCE → PERFORMANCE +++
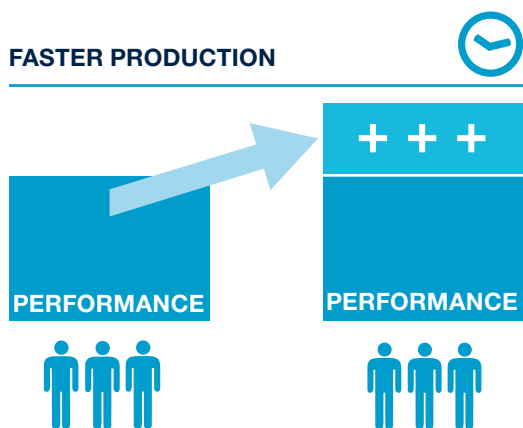
Processing orders more quickly allows you to start the next job sooner. This means you get more done in the same amount of time.

Example: The app can conveniently handle the entire edge band management, making the painstaking search for edges a thing of the past (see page 27).

GROW POTENTIAL
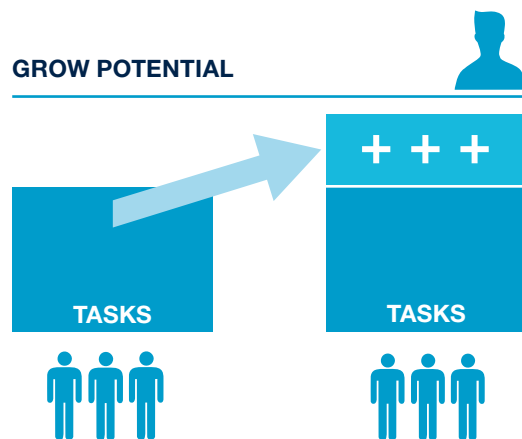
TASKS → TASKS +++

Your team is available for new tasks earlier or can take on additional tasks. This allows you to get more out of your business with the same headcount.

Example: A robot feeds the CNC intelligently, unstacks according to the order and hands over to a transport robot, all with excellent handling quality and even long after the end of the working day if necessary (from page 34).

BOOST OUTPUT
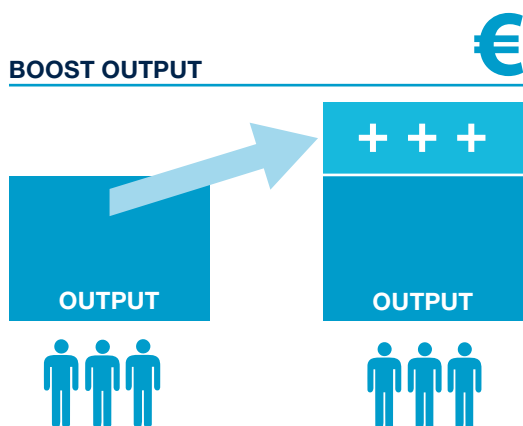
OUTPUT → OUTPUT +++

Targeted improvements to cutting waste, for example, can help you get more from your material. This means Same input - more output.

Example: Use the app to optimize cutting plans in seconds and transfer the new parameters directly to the machine. This is the easy way to make your business more efficient (see pages 14 and 24).

INCREASE QUALITY

QUALITY → QUALITY +++

Workpiece tracking and plausibility checks help you avoid easy mistakes. Push notifications from the machine to the operator allow for quick reactions and help regulate the process.

Example: The app lets you see where your workpiece is at all times. It makes part tracking easy, giving you a constant overview on your smart device wherever you are (see page 13).

From maps **to satellites**

It used to be that if you wanted to know the way somewhere, you had to pore over a map or ask someone on the street. Today, all we have to do is take our phone from our pocket and we have all the necessary information about the route at our fingertips. If an obstacle blocks our path, we receive alternative suggestions in real time to help us find another way to our destination. We've been happily using these tools in our everyday lives for years, so why not use them in business too?

WHY CELLS? WHY NETWORKED CONNECTION?
THE BENEFITS ARE OBVIOUS

We use the term "cell" to refer to the connection of machinery and software along the production process in an operation. Apps can also support the work steps and organization in the business in order to further improve the production process.

APPS – SMALL BUT MIGHTY
HOW CAN DIGITAL PRODUCTS AND APPS MAKE A DIFFERENCE IN YOUR BUSINESS?

- **Get it done faster!**
  Fewer low-value activities mean you can get jobs done quicker
- **Get started sooner!**
  Get processing the next orders earlier and allocate staff to additional tasks. Waiting times are also minimized.
- **Wherever and whenever you need it!**
  Access all the data you need at any time and from anywhere on your smartphone or tablet
- **Less really is more!**
  Optimize cutting easily to reduce waste and get more from the unfinished panel
- **Even better!**
  Increase process quality – with transparency and digital part tracking that help you avoid simple errors. Machines report anomalies proactively via the app
- **React quickly!**
  Having the relevant analysis data and evaluations available at the push of a button allows you to make changes faster. This lets you make quick adjustments for optimization, for example

All of our apps are neutral. This means that you can also use them for non-HOMAG machines.
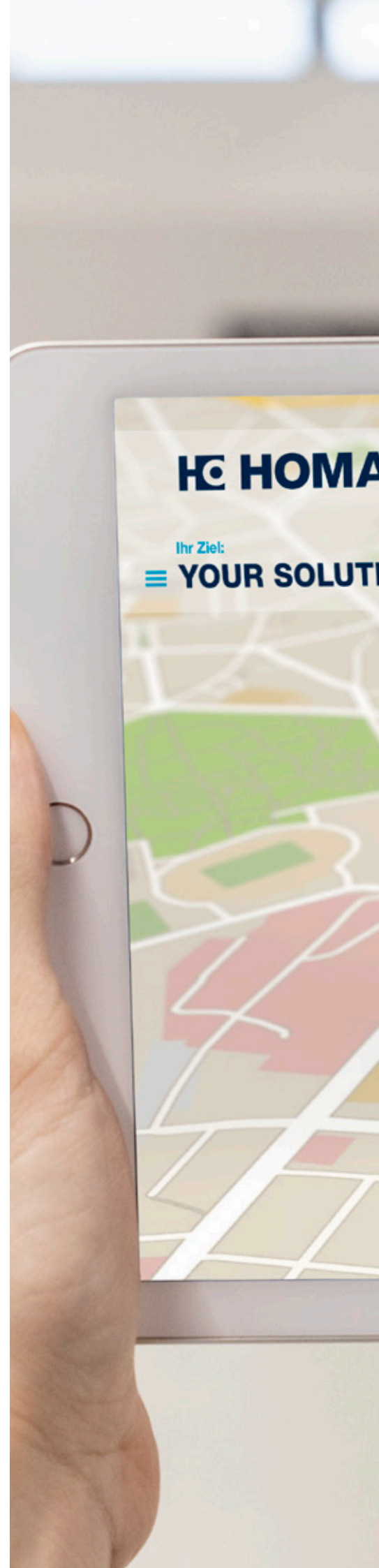
Step by step to success
Grow at your own pace

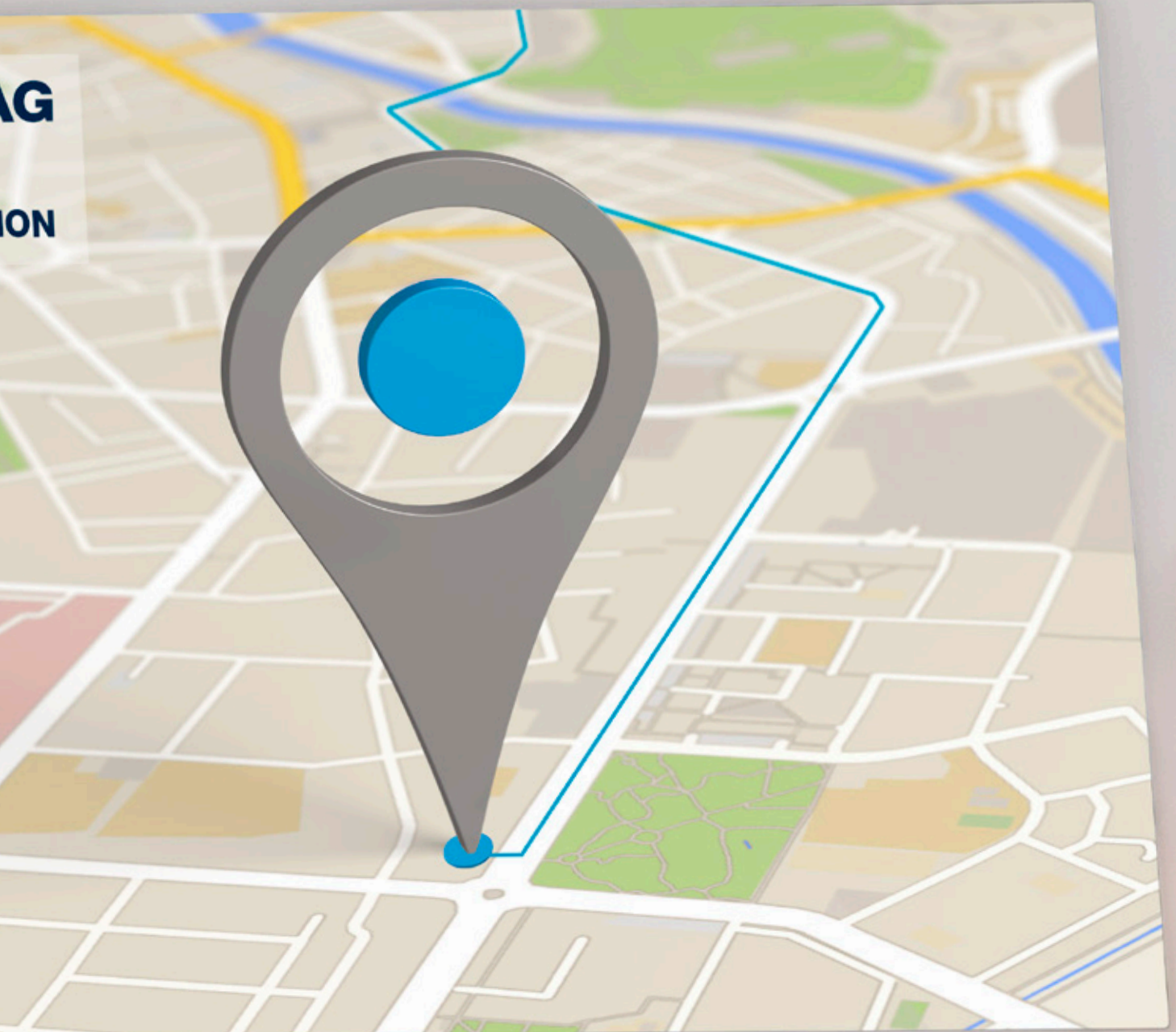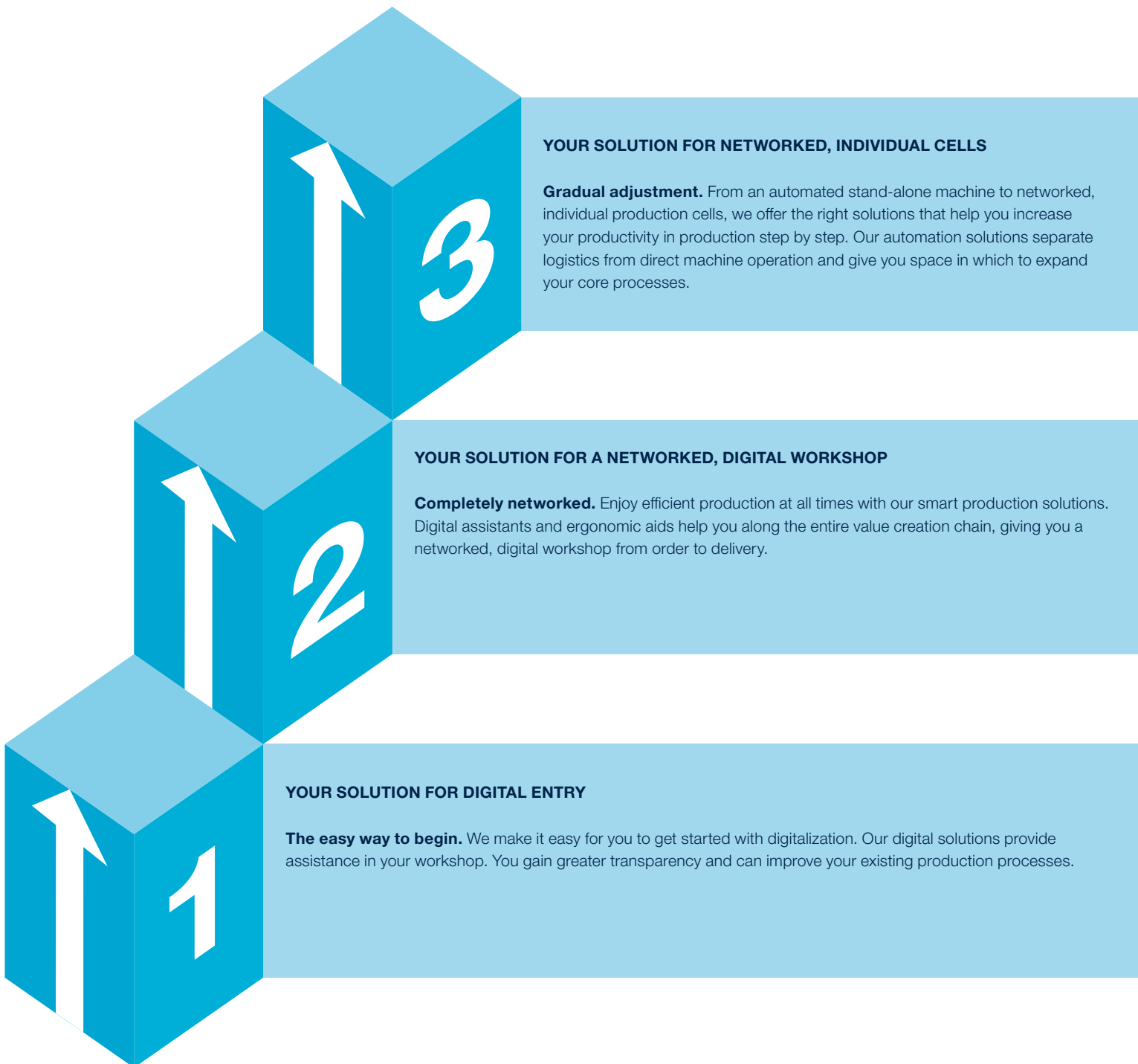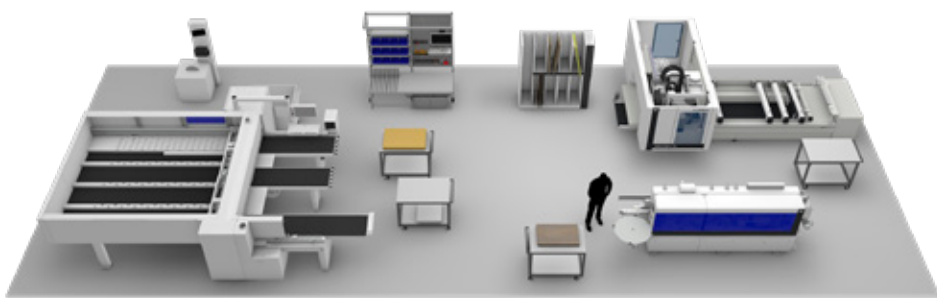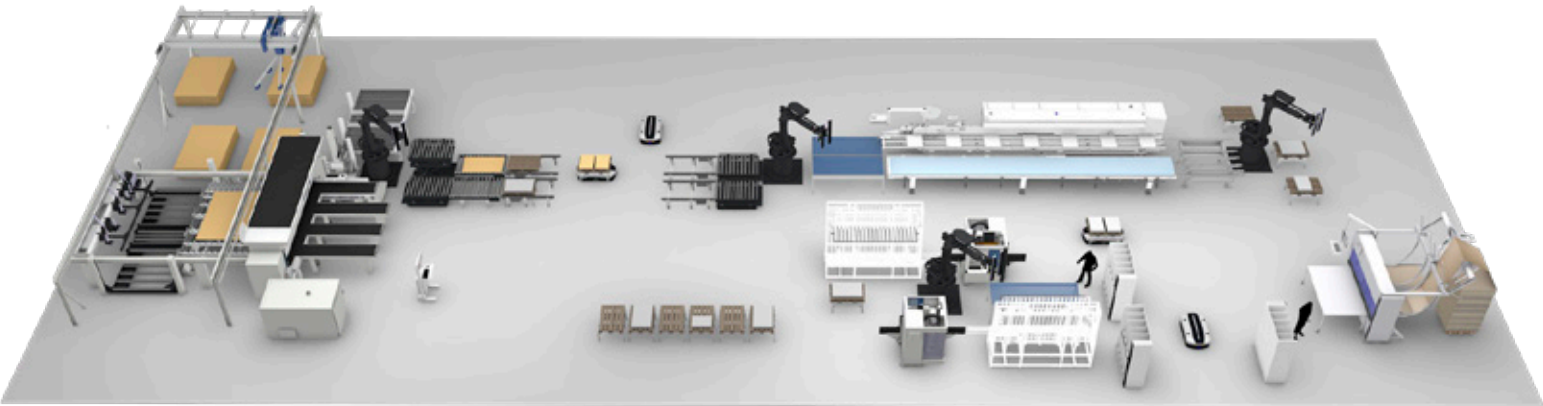Our individual components and modular solutions give you the space you need to take on the challenges of today and tomorrow. Simply start with your existing production system and develop gradually, from digital entry to networked, individual cells with fully automated production. We are here to help you on the way to success.

YOUR SOLUTION FOR NETWORKED, INDIVIDUAL CELLS

Gradual adjustment. From an automated stand-alone machine to networked, individual production cells, we offer the right solutions that help you increase your productivity in production step by step. Our automation solutions separate logistics from direct machine operation and give you space in which to expand your core processes.

YOUR SOLUTION FOR A NETWORKED, DIGITAL WORKSHOP

Completely networked. Enjoy efficient production at all times with our smart production solutions. Digital assistants and ergonomic aids help you along the entire value creation chain, giving you a networked, digital workshop from order to delivery.

YOUR SOLUTION FOR DIGITAL ENTRY

The easy way to begin. We make it easy for you to get started with digitalization. Our digital solutions provide assistance in your workshop. You gain greater transparency and can improve your existing production processes.
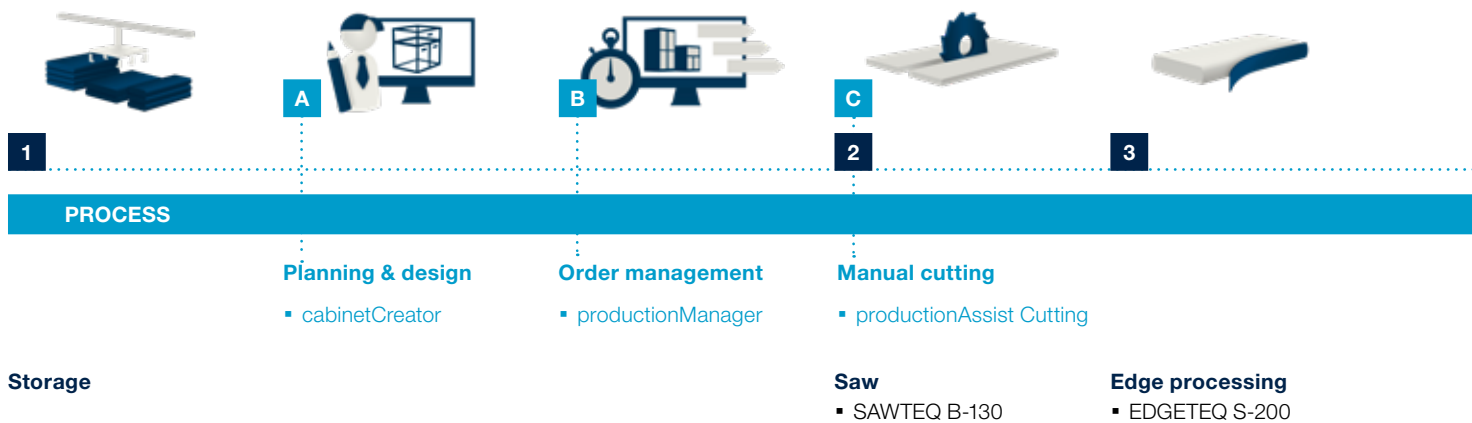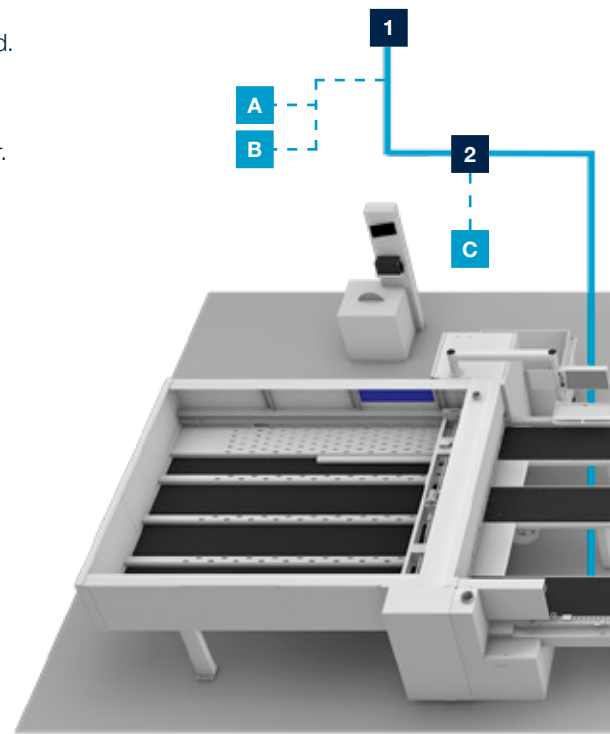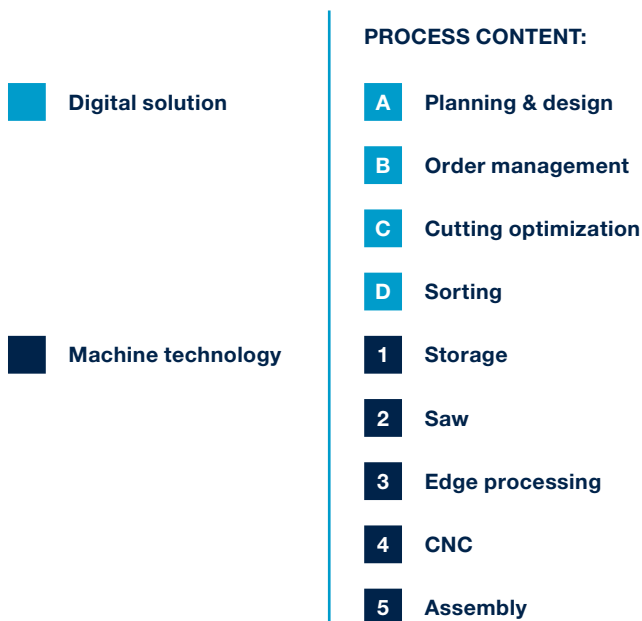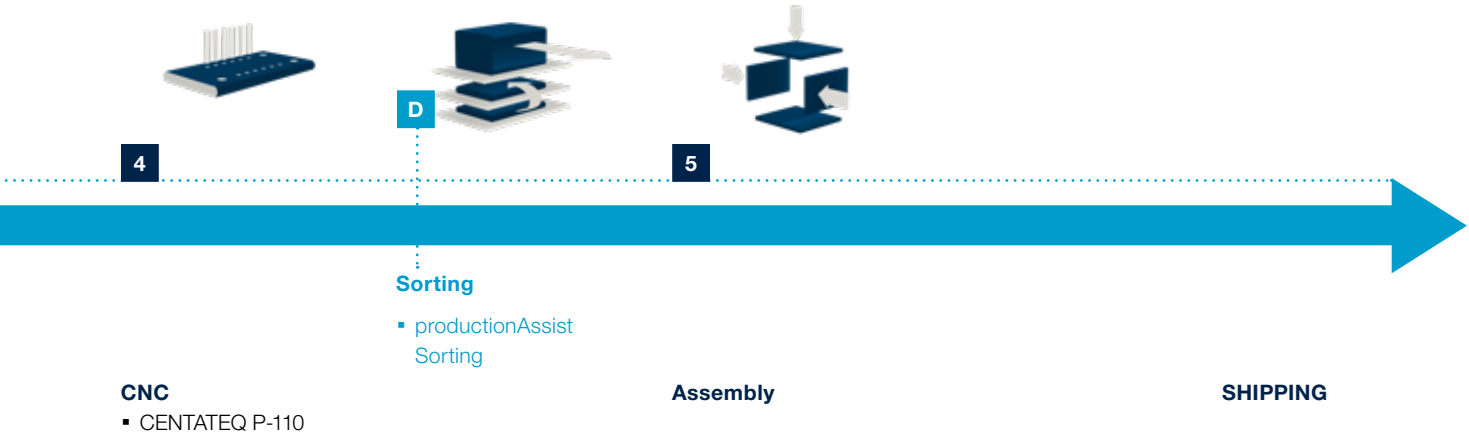
Cell 1: Digital entry
The easy way to begin.

At some point, every business is faced with the question of how best to get started. Our "Digital entry" workshop Concept provides the answer.
This system gives you greater transparency in production, helps you identify areas for improvement more easily and makes your existing production processes better.

Digital solution

Machine technology

PROCESS CONTENT:

A	Planning & design
B	Order management
C	Cutting optimization
D	Sorting
1	Storage
2	Saw
3	Edge processing
4	CNC
5	Assembly

1
A
B
2
C

PROCESS

1
A
B
C
2
3

Planning & design
▪ cabinetCreator

Order management
▪ productionManager

Manual cutting
▪ productionAssist Cutting

Storage

Saw
▪ SAWTEQ B-130

Edge processing
▪ EDGETEQ S-200

5

D

4

3

4

D

5

Sorting

- productionAssist Sorting

CNC
- CENTATEQ P-110

Assembly

SHIPPING

Your solution for digital entry

A

Planning & design
cabinetCreator

WHAT YOU NEED:
- How can I access digital order data easily?
- Where do I get a bill of materials?
- How can I create programs for the CNC machine?

HOW THE APP HELPS:
- Web-based case furniture configuration
- Library with basic shapes such as straight cabinet, corner floor cabinet, sloping ceiling cabinet
- Selection of hardware from all leading manufacturers: Blum, Grass, Häfele, Hettich, Lamello
- 2D/3D furniture visualization

- Generation of all relevant production data:
  - Customer order
  - Bill of materials for cutting
  - CNC programs
  - Individual part drawings
  - 3D assembly diagram

HOW YOU BENEFIT:
- Easy to use with step-by-step navigation
- Fast generation of production data
- Ability to create your own furniture library
- Ability to store individual design rules
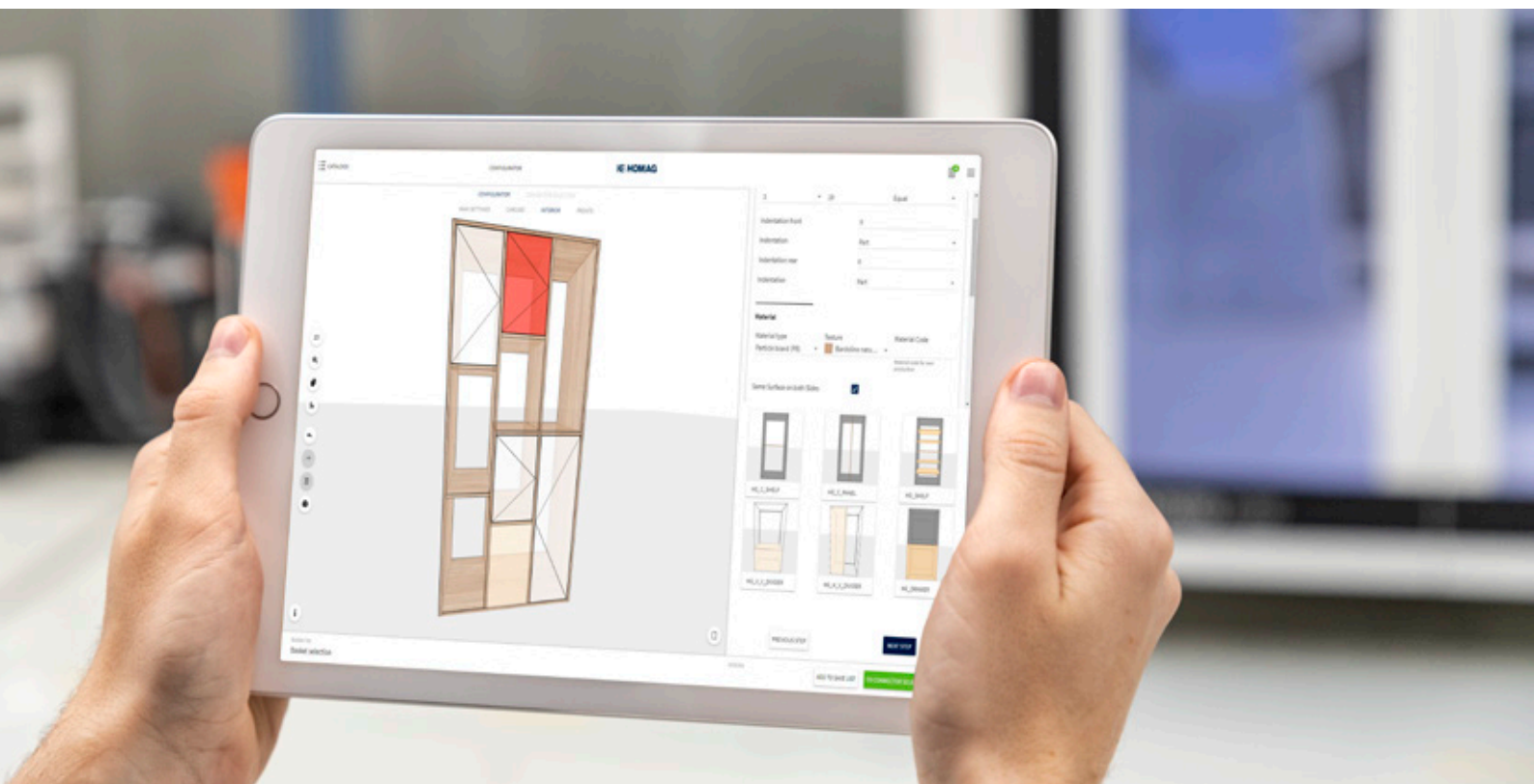
B

Digital order folder
productionManager

WHAT YOU NEED:
- How can I use different data sources?
- How can I ensure data consistency between work preparation and the workshop?
- How can I use my order data throughout the process?

HOW THE APP HELPS:
- Simple data import from any systems, such as Excel, industry software or the cabinetCreator
- Manually add parts and information like panels easily
- Overview of all orders/batches

- Order information available at all times
- Can be used for all work steps
- Transfer parts to the cutting assistant or intelliDivide
- Illustration of production progress

HOW YOU BENEFIT:
- Flexible – Import data in different formats from different systems
- Efficient – Use order data across all work steps
- Transparent – Overview of status and progress for all parts

C

Cutting optimization
intelliDivide

With intelliDivide, you get a selection of optimized cutting plans at your fingertips. Simply upload your parts list and you're done. The plans can be adjusted to your needs, focusing on reduced cutting waste, short machinery running times or easy handling, for example. All this without the need for additional investments in software and processing power. Simply reserve through tapio.

- **Faster and with drastically reduced staff workload**
  Optimization begins automatically immediately after uploading. intelliDivide always calculates several alternatives for you to select from. The results are ready for the machine immediately, without the need for adjustments
- **Mobile and flexible**
  Use intelliDivide whenever you work and on whatever system regardless of whether you use iOS, Android, Windows or Mac OS
- **Zero investment and hardware costs**
  intelliDivide is software as a service. This means you only pay for what you use, without the need to invest in your own software, updates or computer hardware
- **Ideal for all tapio-ready saws**
  tapio knows your HOMAG saw. You no longer have to enter machine parameters and can simply transfer the results of the optimization with the click of a mouse

Precise saw
SAWTEQ B-130 with module45

HOMAG's smallest saw comes with everything you need to cut individual panels and small batches as standard. Costing little more than a sliding table saw, it delivers a faster, more precise and more efficient cut. This is thanks to proven HOMAG technology, along with a range of automation and processing options.

SAWTEQ B-130 WITH MODULE45	
Saw blade projection (mm)	65
Cutting length(s) (mm)	3,200
Program carriage speed (m/min)	Up to 60
Program fence speed (m/min)	Up to 60
Operating software	CADmatic 5
Monitor	21" full-HD widescreen monitor with multitouch display

- **CADmatic 5**
  CADmatic 5 is HOMAG's powerful and cutting-edge saw control system. Offering a huge range of functions, it is easy to use thanks to its intuitive controls, graphical assistance and clear management functions. CADmatic 5 is also tapio ready and can communicate with other machines and software solutions
- **module45**
  Make your saw master the miter cut. module45 lets you perform all cuts and miter cuts using the same saw. Flexible, efficient and fully adjustable from 0° to 46° degrees, you don't even need to change station
- **Automatic labeling**
  Identify every single part and provide important information for the next processing station
- **Further equipment options**
  Angular and stress-elimination cutting function, grooves and much more
- **For beginners**
  CADplan as cutting plan optimization directly on the machine

2

3

Smart edge processing
EDGETEQ S-200 (MODEL 1130 FC)

Workpieces are fed in and removed manually.
Finished workpieces are transported on a pallet to the next
machine via forklift.

This machine delivers a smart entry-level solution for
woodworking shops. The precise gluing section features a
special infeed system that can process even PUR adhesive
effortlessly.
The machine offers a combination of three finish processing
units and a profile trimming tool that is unique in this
performance category. This ensures maximum flexibility in
workpiece finishing.
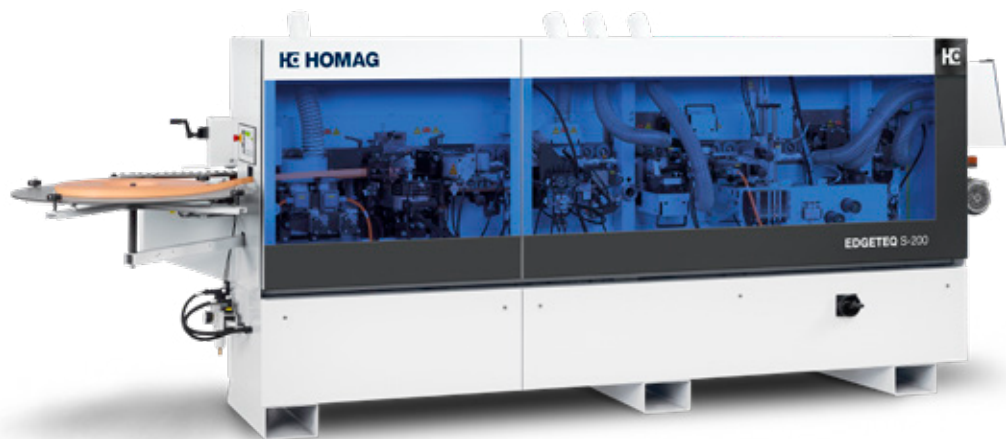
Compact info:
- Feed rate 8 m/min
- Joints with workpiece diameter 100 mm and horizontal
  adjustment
- Gluing unit for coil material and fixed lengths
- Application unit suitable for EVA and PUR

EDGETEQ S-200 (MODEL 1130 FC)	
Workpiece thickness (mm)	min/max = 8/60
Edge thickness (mm)	min/max = 0,3/3
Part dimensions (mm)	min = 250 x 250 or 70 x 250
Working height (mm)	950

5 cycles/minute, workpiece throughputs/minute, number of
edged workpiece sides/minute, workpiece length 1,000 mm

4

Compact CNC processing
CENTATEQ P-110

CENTATEQ P-110	
Placeable part (mm)	X= 3,100/4,200 / Y=1,600
Z height (mm)	260 from console
Drilling gear	V12 H4X2Y saw 0/90° / V21 H6X4Y saw 0/90° incl. quick-change system
Routing spindle	5-axis DRIVE5CS 10/12 kW
Tool change system	14-fold moving + 10-fold moving in X direction

- Sawing, drilling and routing systems for the needs of today and the products of tomorrow
- Universally suitable for a range of solid or panel materials
- Suitable for a range of procedures, including 3D formed parts

Compact info:
- **360° free space**
  Bumper safety technology on all sides. No need for fixed installations around the machine – freely installable, adjustable and accessible from all sides
- **Integrated switch cabinet**
  > Space saving
- **Comfort package**
  Control operating functions at the push of a button directly on the machine. Proximity sensor for intelligent pausing prevents bumpers being triggered

D

Sorting
productionAssist Sorting

WHAT YOU NEED:
- How can I ensure that all of the parts for assembly in the bench room are complete?
- How can I avoid the time-consuming search for components?

HOW THE SHELF HELPS
- Sorting shelf as self-build kit
- HOMAG provides the drawing, CNC programs, electronics kit (LED bar, mini PC)
- HOMAG provides the app for parts management

HOW THE APP HELPS:
- User can view missing parts for each order/box in the app
- Purchased parts: Select parts, print label and sort
- Sort parts according to order position/items
- Allocate parts manually or by scanning the part barcode
- Display of sorted parts per item and box
- Shelf confirms furniture completeness via LED signal

HOW YOU BENEFIT:
- Better production organization
- No more waiting times caused by missing parts
- Parts pre-sorted for bench room
- All parts for assembly are complete

Cell 2: The networked, digital workshop
Gradual adjustment.

In the "Networked, digital workshop" system, each machine is operated by a single person. Work preparation, machine park and bench room are organizationally separated here. The machine operators have some of the order data in digital form.

F

6

Digital solution

PROCESS CONTENT:

A	Planning & design
B	Order management
C	Cutting optimization
D	Edge band management
E	Sorting
F	Assembly
1	Storage
2	Nesting
3	Drilling/dowel driving
4	Edge processing
5	Sanding
6	Compressing

Machine technology

5

1

A

B

C

2

3

PROCESS

Planning & design
- woodCADICAM

Order management
- productionManager

Cutting optimization
- intelliDivide

Storage

Nesting
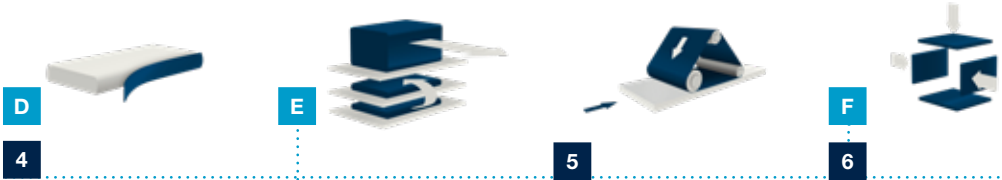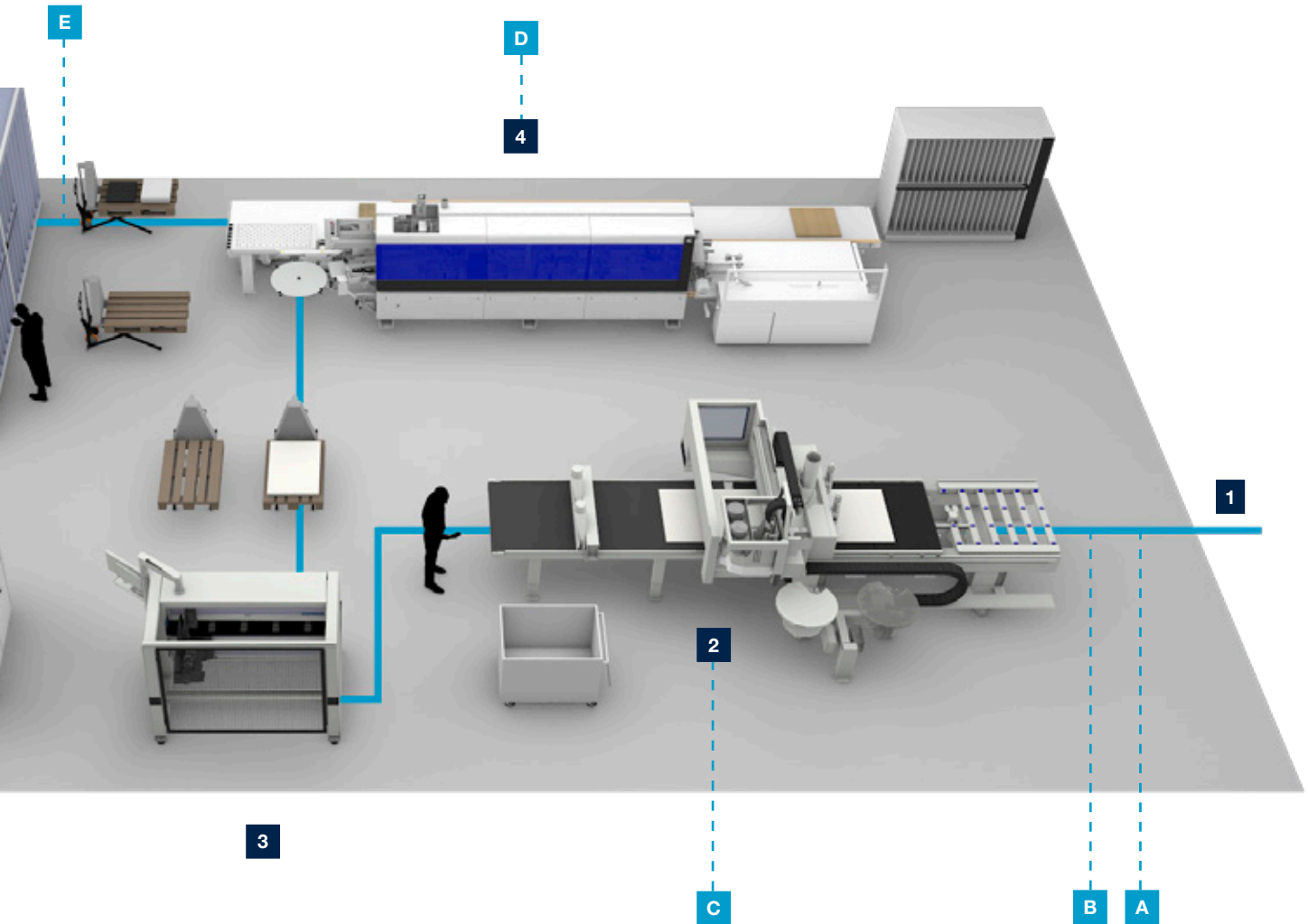- CENTATEQ N-600

Drilling/dowel driving
- DRILLTEQ D-510

E

D

4

1

2

C

B **A**

3

D

E

5

F

6

4

**Edge band
management**

- productionAssist Edge

Sorting

- productionAssist Sorting

- intelliSanding

Assembly

- productionAssist
Assembly

Edge processing

- EDGETEQ S-380

Sanding

- SANDTEQ W-200

Compressing

- CABTEQ S-250

SHIPPING

Your solution for a networked, digital workshop

A

Planning & design
woodCAD|CAM

WHAT YOU NEED:
- Multiple programs for drawings, bills of materials, calculation and CNC programming mean high workload and error rates
- Time-intensive CAD design
- High complexity when faced with change requests
- Programming on the CNC machine

KEY FUNCTIONS:
- Design of cases/objects/parts with simultaneous background data generation
- Presentation and rendering
- Intelligent hardware technology

- Specific CNC programs for different machine types (DRILLTEQ/CENTATEQ)
- High data quality for production
- Range of definable bills of materials and outputs
- Production control module

HOW YOU BENEFIT:
- Support in gaining orders
- Accelerated design process
- Consistent rules and master data in your business, along with greater process reliability
- Optimized work preparation and production
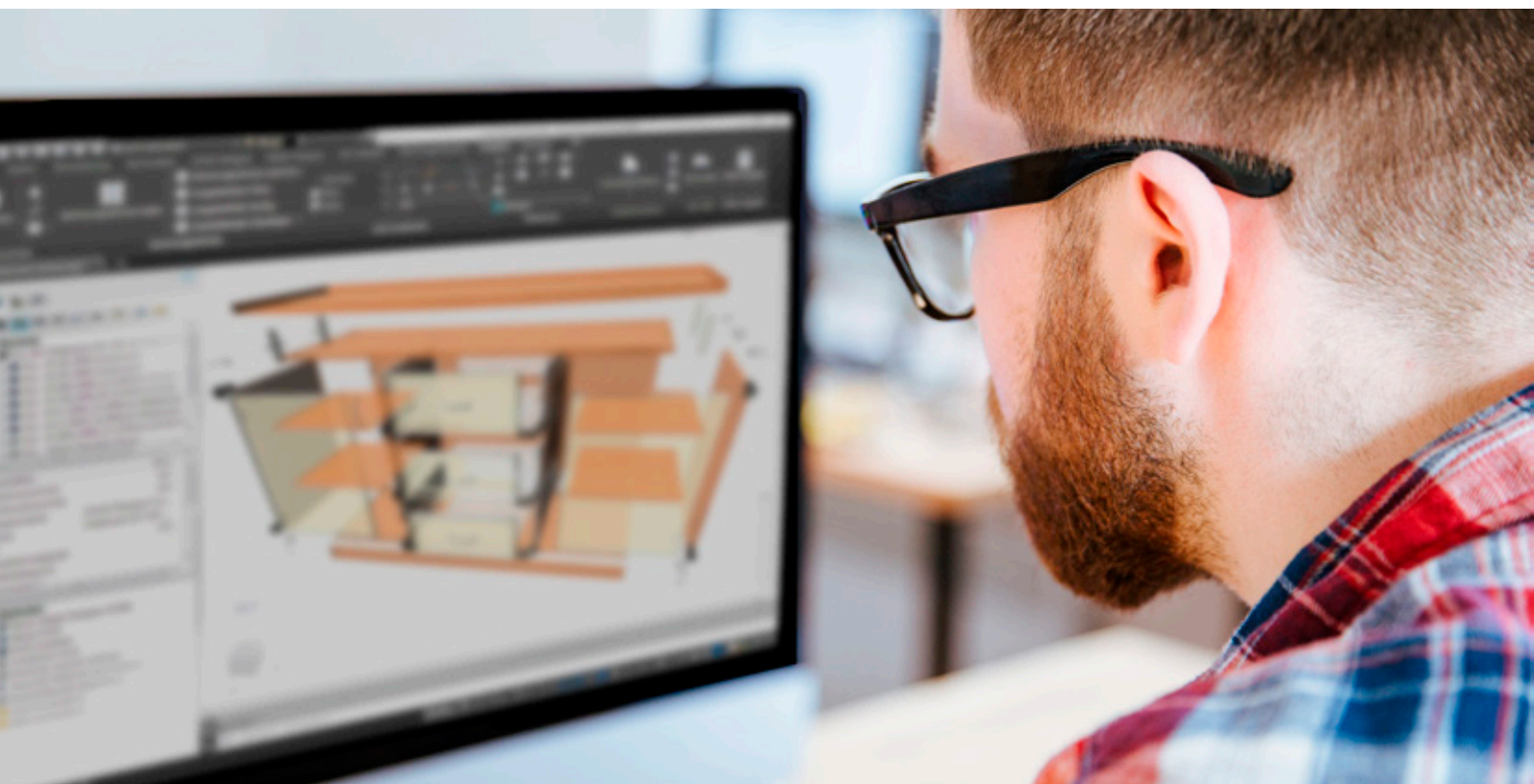
Digital order folder
productionManager

WHAT YOU NEED:
- How can I use the various types of data?
- How can I use the data continuously between work preparation, machinery and the bench room?
- How can I use my order data throughout the process?

HOW THE APP HELPS:
- Simple data import from any systems, such as Excel, industry software or the cabinetCreator
- Manually add parts and information like panels easily
- Overview of all orders/batches
- Order information available at all times
- Can be used for all work steps
- Transfer parts to the cutting assistant or intelliDivide
- Illustration of production progress

HOW YOU BENEFIT:
- Flexible – Import data in different formats from different systems
- Efficient – Use order data across all work steps
- Transparent – Overview of status and progress for all parts

Cutting optimization
intelliDivide Nesting

WHAT YOU NEED:
- Automatic creation of cutting plans for saws and nesting CNC

HOW THE APP HELPS:
- **Simply upload your parts list and you're done.**
  With intelliDivide, you get a selection, of optimized cutting plans at your fingertips
- **Faster and with reduced staff workload**
  Optimization begins immediately after uploading. Calculates multiple alternatives. The results are ready for the machine immediately, without the need for adjustments.
- **Mobile and flexible**
  Use intelliDivide whenever you work and on whatever system
- **Zero investment and hardware costs**
  intelliDivide is software as a service. This means you only pay for what you use, without the need to invest in your own software or hardware.

- **Ideal for tapio-ready and nesting CNCs**
  tapio knows your HOMAG machine. There is no need to enter the machine parameters. Results are applied at the click of a mouse

KEY FUNCTIONS:
- Automatic nesting of woodWOP programs
- Reduced material consumption, better capacity utilization

HOW YOU BENEFIT:
- Entry-level nesting solution
- Easy-to-Use
- Can be booked monthly
- Independent of hardware and operating system
- Can be used by multiple users simultaneously
- Can be combined with intelliDivide for saws

2

Nesting CNC
CENTATEQ N-600

Incl. 5-axis processing and Clamex routing

Alongside the use of various connectors (e.g. Clamex, Lockdowel), the system also offers a range of processing procedures (e.g. miter cuts) and can handle a variety of material properties (e.g. HPL coatings, wood grain imitations).

Perfect raw material nesting

- Premium raw materials need to be handled with care. Cases have to be produced quickly, either on a commission basis or in small batches. Sometimes, you have to fit an important order into existing production schedules
- IntelliGuide provides the perfect nest, the ideal way to package panels according to requirements (e.g. optimization by time, material or on a commission basis)

User assistance systems

- Identifying the workpieces with labels and order picking support in the work process make it possible to perform the process faster and more efficiently
- Available as support: the new woodPrint 4.0 labeling software

CENTATEQ N-600	
Table size (mm)	(7*10) FT (2.250*3.100)
Drilling gear	V21H6X4YN incl. quick-change system
Routing spindle	5-axis unit with unit interface
Expansion	Clamex starter kit
Tool change system	14-fold with coupled motion + separate pick-up station

3

Horizontal drilling, routing and doweling
DRILLTEQ D-510

Furniture production is currently moving toward invisible connectors (e.g. Clamex) and hardware (e.g. Tiomos H) that require virtually no tools. These components are often hidden in the edges of the workpieces, requiring complex routing work and deep drilling holes.

- These drilling holes (e.g. cutting depth of 65 mm) are created using special routing units on drilling and doweling machines
- Cutting depths of up to 65 mm. Horizontal routing with a servo-driven stroke of up to 80 mm

intelliGuide basic user assistance systems
- Intuitive and accurate workpiece positioning with intelliGuide Basic
- Identifying workpieces using a label scanner and order picking support in the work process make it possible to perform the process faster and more efficiently

DRILLTEQ D-510	
Working area width (mm)	1,250
Servo-driven drill feed	
Drilling gear	vertical 1 x 5;
	horizontal 1 x 3;
Routing spindle	Solidfix trimming unit with
	tool removal
Software	+ Clamex routing components
Barcode	Software and scanner
User assistance systems	intelliGuide Basic

D
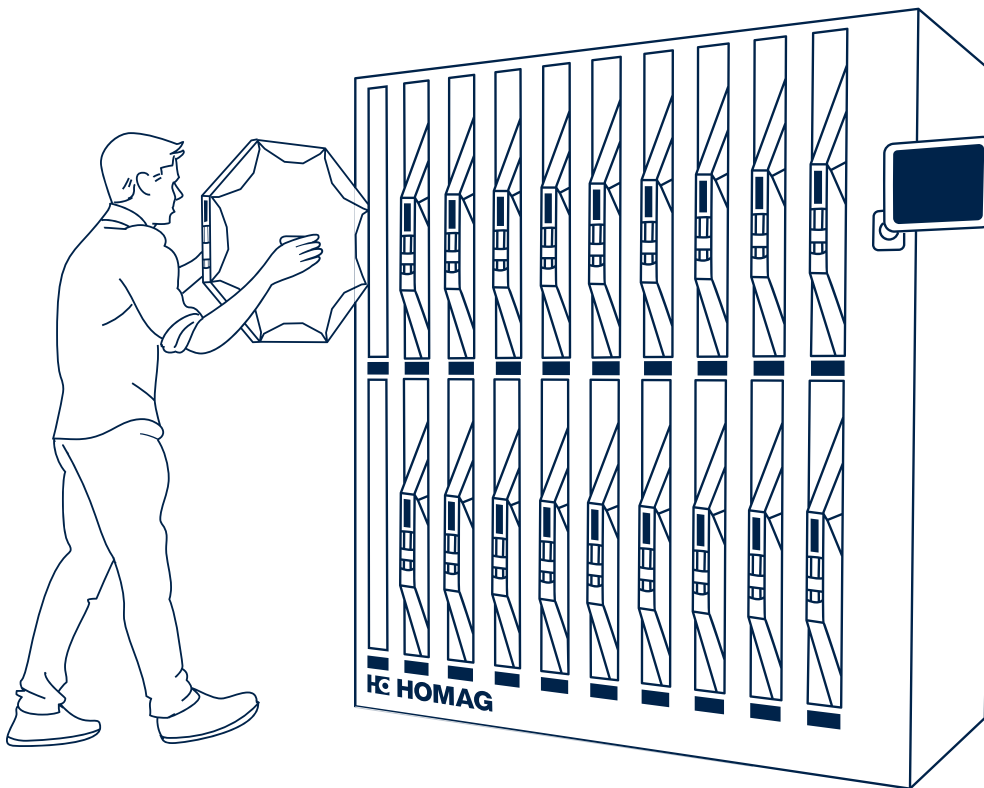
Edge band management
productionAssist Edge

WHAT YOU NEED:
- How can I manage my edge band inventories and quickly find the edges I am looking for?
- How can I make sure that there is still enough edge material?

HOW THE APP HELPS:
- Store edges in shelf:
  Identify edge band and allocate to edge band management
- Print and attach edge band label
- Display required linear meters for each edge band type in the app
- Pick by light: LED display of the required edge bands in the shelf
- Edge preparation and machine tooling

HOW YOU BENEFIT:
- Organized and managed edge bands
- Overview of available edge bands
- Pick by light removes the need for searching

Edge processing with return conveyor
EDGETEQ S-380 profiLine

4

The workpieces are fed in manually and transported back to the operator via the return conveyor belt. Finished workpieces are transported on a pallet to the next machine via forklift.

The EDGETEQ S-380 profiLine works efficiently and can be used on any material, making it the perfect solution to their growing variety. It is part of the profiLine modular series and is fitted with features that are precisely tailored to the workpiece spectrum of this particular cell. In terms of speed and performance, it dovetails perfectly with the LOOPTEQ workpiece return feed system.

COMPACT INFO:
- Feed rate 18 m/min
- Joints with workpiece diameter 100 mm and horizontal adjustment
- Gluing unit for coil material and fixed lengths up to 12 mm in edge thickness
- Gluing option for airTEC; EVA and PUR, each with pre-melting unit
- Application unit suitable for EVA and PUR
- Twin-motor-powered snipping unit with pneumatic chamfer/straight adjustment and flush/overhang snipping
- 2-radii technology with trimming, profile trimming and scraper units (MS40, MF50 and MZ40)

EDGETEQ S-380 PROFILINE	
Workpiece thickness min/max (mm)	8/60
Edge thickness min/max (mm)	0.3/12
Part dimensions min. (mm)	160 x 160 oder 70 x 160
Part dimensions max. (mm)	2,500 x 1,000
Total machine length (mm)	6,260
with return conveyor (mm)	10,500
Working height (mm)	950
Compressed air connection	6 bar
Total connected load of machine (kW)	39.3
incl. return conveyor	

Return conveyour
LOOPTEQ O-300

The LOOPTEQ O-300 is an indispensable aid for efficient workpiece return and the perfect way to expand single-side edge banding machines. From custom manufacturing and batches to mass production, it helps make your production processes more efficient. The result is perfectly automated edge processing.

- Efficient one-person operation
- Continuous workpiece flow
- Gentle workpiece handling
- Can process wide range of parts
- Ergonomic processes
- Intuitive control

LOOPTEQ O-300	
Workpiece	
Length (mm)	240 - 2,700
Width (mm)	60 - 1,000
Thickness (mm)	8 – 80
4-sided processing:	
min. workpiece length (mm)	240 x 80
max. workpiece length (mm)	2,500 x 1,000
4-sided processing allows larger parts to be returned or ejected with manual intervention in rotation and transverse offset	
Workpiece weight (kg)	max 50
Workpiece grammage (kg/m^2)	max 20

5

Sanding machine
SANDTEQ W-200

▪ Compact and attractive entry-level model with premium equipment
▪ Can be used flexibly for calibration, fine sanding and lacquer sanding
▪ All equipped with eps. This ensures that the sanding band is applied with the right pressure to all parts of the workpiece to guarantee a perfect sanding result

SANDTEQ W-200	
Working width (mm)	1,100
Workpiece thickness (mm)	3 - 160
Feed rate (m/min)	2.5 - 13
Suction output (m3/h)	ca. 2,900
Length/width/height (mm)	1,720/1,700/2,000

E

Sorting
productionAssist Sorting

WHAT YOU NEED:
- How can I ensure that all of the parts for assembly in the bench room are complete?
- How can I avoid the time-consuming search for components?

HOW THE SHELF HELPS:
- Sorting shelf as self-build kit
- HOMAG provides the drawing, CNC programs, electronics kit (LED bar, mini PC)
- HOMAG provides the app for parts management

HOW THE APP HELPS:
- User can view missing parts for each order/box in the app
- Purchased parts: Select parts, print label and sort
- Sort parts according to order position/items
- Allocate parts manually or by scanning the part barcode
- Display of sorted parts per item and box
- Shelf confirms furniture completeness via
  LED signal

HOW YOU BENEFIT:
- Better production organization
- No more waiting times caused by missing parts
- Parts pre-sorted for bench room
- All parts for assembly are complete

F

Assembly
productionAssist Assembly

WHAT YOU NEED:
- How can I see which parts belong to which cabinet?
- Which hardware do I need?
- How can I access all of my assembly drawings?

KEY FUNCTIONS:
- Display of explosion drawing and part drawings
- Display of 3D furniture drawing
- Display of bill of materials as tree structure
- List of required hardware
- Displaying the furniture that can be assembled
- Interaction with intelligent sorting shelves

CABTEQ S-250
Flexible case clamp

The CABTEQ S-250 is the ideal assembly aid when it comes to pressing case furniture. This highly versatile machine is well suited for workshops, interior design or custom industrial production. With its ergonomic environment featuring an adjustable pre-plugging station or manual case aligner, it makes assembly more efficient, boosts output and makes life much easier for users.

▪ Tight, clearly pressed cases, with precise right angles
▪ Intuitive operation with no need for previous knowledge
▪ Compact design fits in every workshop
▪ Plug & play: simply set up, connect and get started
▪ Ergonomic environment (optional) makes the assembly process easier

6

| CABTEQ S-250	
Case dimensions:	
Length min/max (mm)	150 - 3,000
Depth min/max (mm)	250 - 900
Height min/max (mm)	150 - 1,400
Pressing force (variable):	
Vertical	max 12 - 18 KN
Horizontal	max 12 - 18 kN
Positioning speed:	
Fast motion (mm/s)	50
Slow motion (mm/s)	25
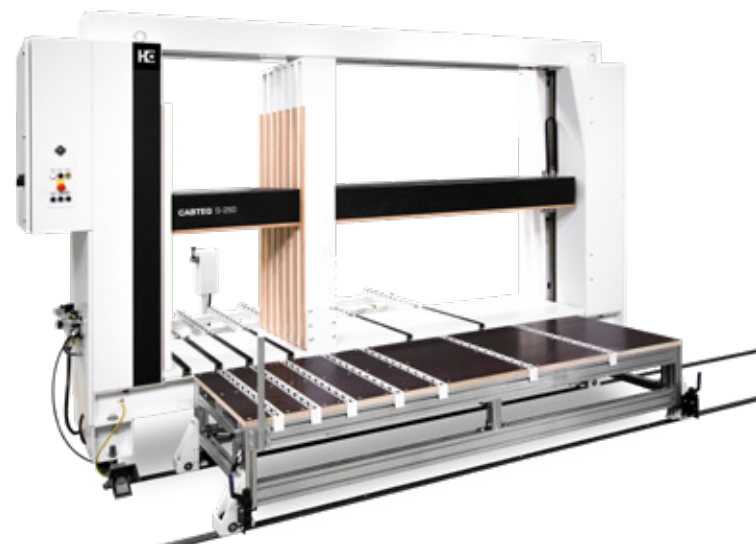
Cell 3: Networked, individual cells
Completely networked.

We have developed modular, expandable processing cells specially designed for small and medium-sized woodworking companies. Each individual cell represents an ideal solution for efficient panel processing. They are networked using our driverless transport robots that we call TRANSBOTs.

The manufacturing execution system ControllerMES handles overall control. This creates a fully autonomous and automated production system that can be variably adjusted for batch size 1 production, from the cuts to the finished packaged furniture.
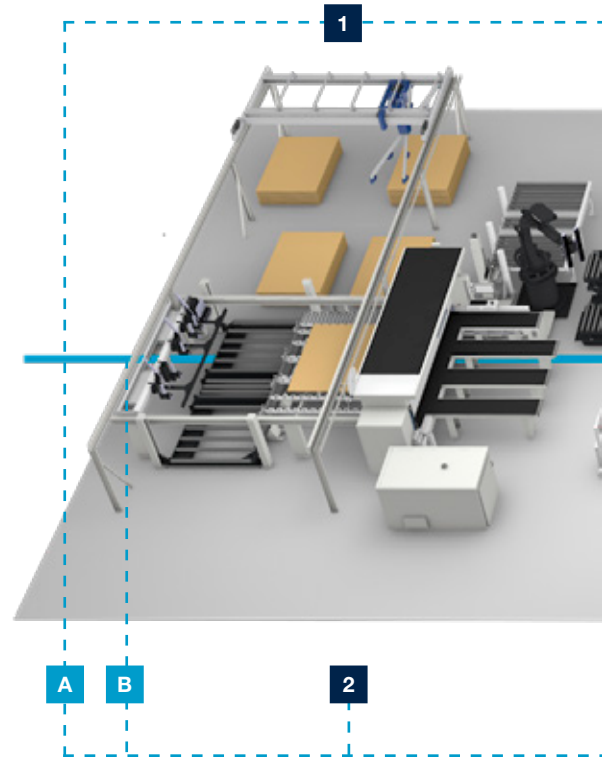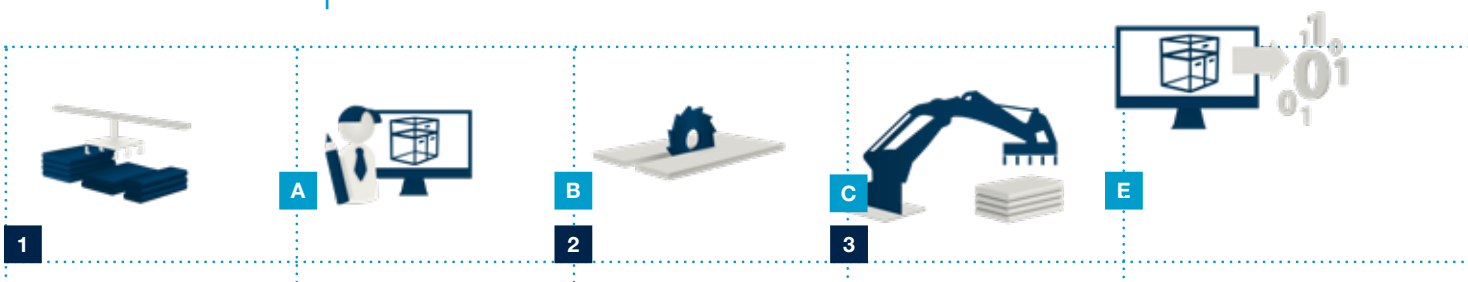
PROCESS CONTENT:

		Digital solution

A	Planning & design
B	Cutting optimization
C	Stacking
D	Machine monitoring
E	Manufacturing execution system

	Machine technology

1	Storage
2	Saw
3	Stack transport
4	Edge processing
5	CNC
6	Packaging

PROCESS

Planning & design
- Configurator3D
- Designer3D

Cutting optimization
- Cut Rite
- intelliDivide

Stacking
- intelliStack

Manufacturing execution system
- ControllerMES

Storage

Saw
- SAWTEQ B-300 flexTec

Stack transport
- TRANSBOT

4

3

C

5

6

E

D

D

4

5

6
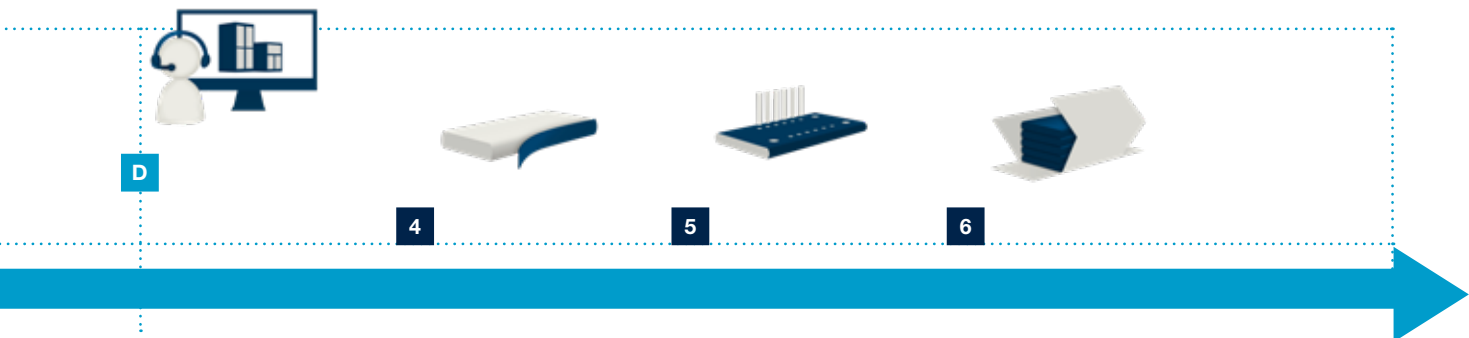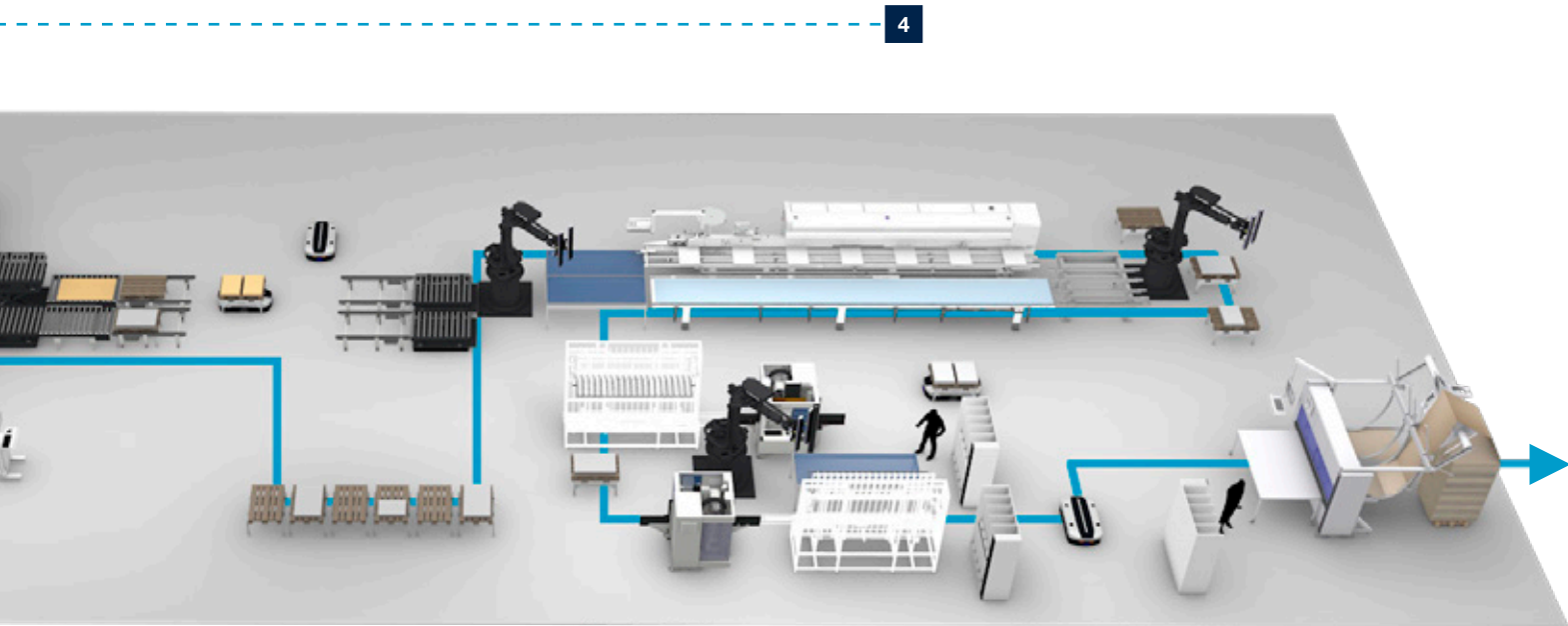
Machine monitoring

▪ MachineBoard

Edge processing   **CNC**   **Packaging**   **SHIPPING**
▪ EDGETEQ S-500   ▪ DRILLTEQ V-200   ▪ PAQTEQ C-250

Your solution for networked, individual cells

A

Planning & design
Configurator3D | Designer3D

WHAT YOU NEED:
- High levels of variation, even among "catalog manufacturers", make order acquisition more complex
- High proportion of special requirements
- No continuous system from sale to production
- Use of planning software in sales discussion

HOW THE APP HELPS – DESIGNER3D:
- Intuitive planning software
- 3D planning with real-time visualization
- Price calculation
- Feature-based product configurator
- Product configuration
- Rendering
- Pricing and offer preparation

HOW THE APP HELPS – CONFIGURATOR3D:
- Powerful configurator
- Wizards for countertops, plinths and cornicing
- Generation of production data

HOW YOU BENEFIT:
- Support for sales with Designer3D
- User-friendly graphic order acquisition in Configurator3D
- Significant reduction in "special" products
- Excellent data quality
- Continuous system from sale to production

B
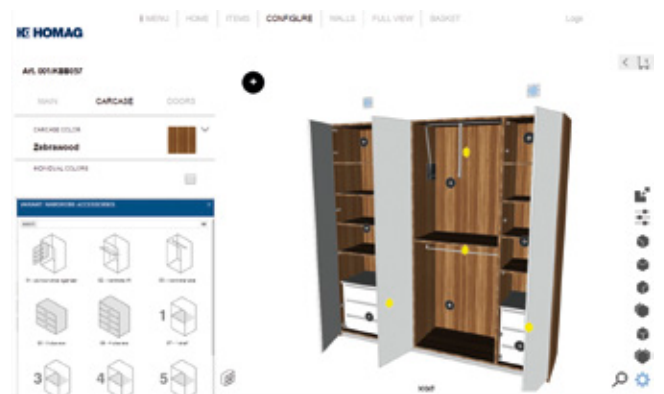
Cutting optimization system
Cut Rite

The classic solution for cut optimization.
This leading software solution helps you reduce cutting waste and overall cutting costs.
- Optimized project management
- Efficient cutting processes
- Full cost control
- Faster calculation

Find out more in the "Cut Rite" brochure.

intelliDivide

- Our powerful app for cutting optimization
- Software-on-demand approach means no local installation

See pages 14 & 24

Robot performance and flexibility
SAWTEQ B-300 flexTec

1

Combines the processing flexibility of classic HOMAG saws with robot performance for automatic cutting in batch size 1 production.

- **More Output**
  At a time when finding the right people is tough, this system makes life easier for the user and frees them up for other important tasks
- **Complete flexibility**
  Manual or automatic operation – the choice is yours
- **Better planning**
  Output remains constant in automatic robot mode, giving you peace of mind when it comes to meeting completion deadlines
- **Master production peaks**
  Depending on the –cutting plan, –the system can produce up to 800 parts per shift in automatic mode. Alongside this, manual cutting can help you handle thin panels, packages and even finishing cuts with ease.
- **Flexible staff planning**
  Robots allow you to easily compensate for vacations and absences

- **Wide range of equipment options**
  The SAWTEQ B-300 flexTec robotic saw can be customized to different requirements and production environments. This is thanks to a wide range of auxiliary technical equipment that largely reflects that of the SAWTEQ B-300 and SAWTEQ B-400
- **Feed systems**
  From connection to your storage facility and an integrated lift table to the separate HOMAG Portal HBX 150 or a side-mounted feed station, you can choose from a wide variety of panel feeding technologies
- **Intelligent destacking**
  The highly intelligent stacking system is the key to largely automated production. Products are destacked on pallets and lifting tables. Users can choose from different combinations
- **Transport**
  In this example, the fully loaded pallets are transported to the next processing station by HOMAG TRANSBOTs. Labels are attached automatically to each part during the sawing process and provide all the necessary information for further processing

SAWTEQ B-300 flexTec SAWTEQ B-400 flexTec	
Panel size (mm)	max. 3,200 x 2,100
Part size (mm)	max. 2,800 x 1,200 min. 190 x 100
Panel thickness (mm)	max 60 min 8
Productivity	up to 800 parts/shift
Max. panel weight (kg)	125
Max. grammage (kg/m^2)	20
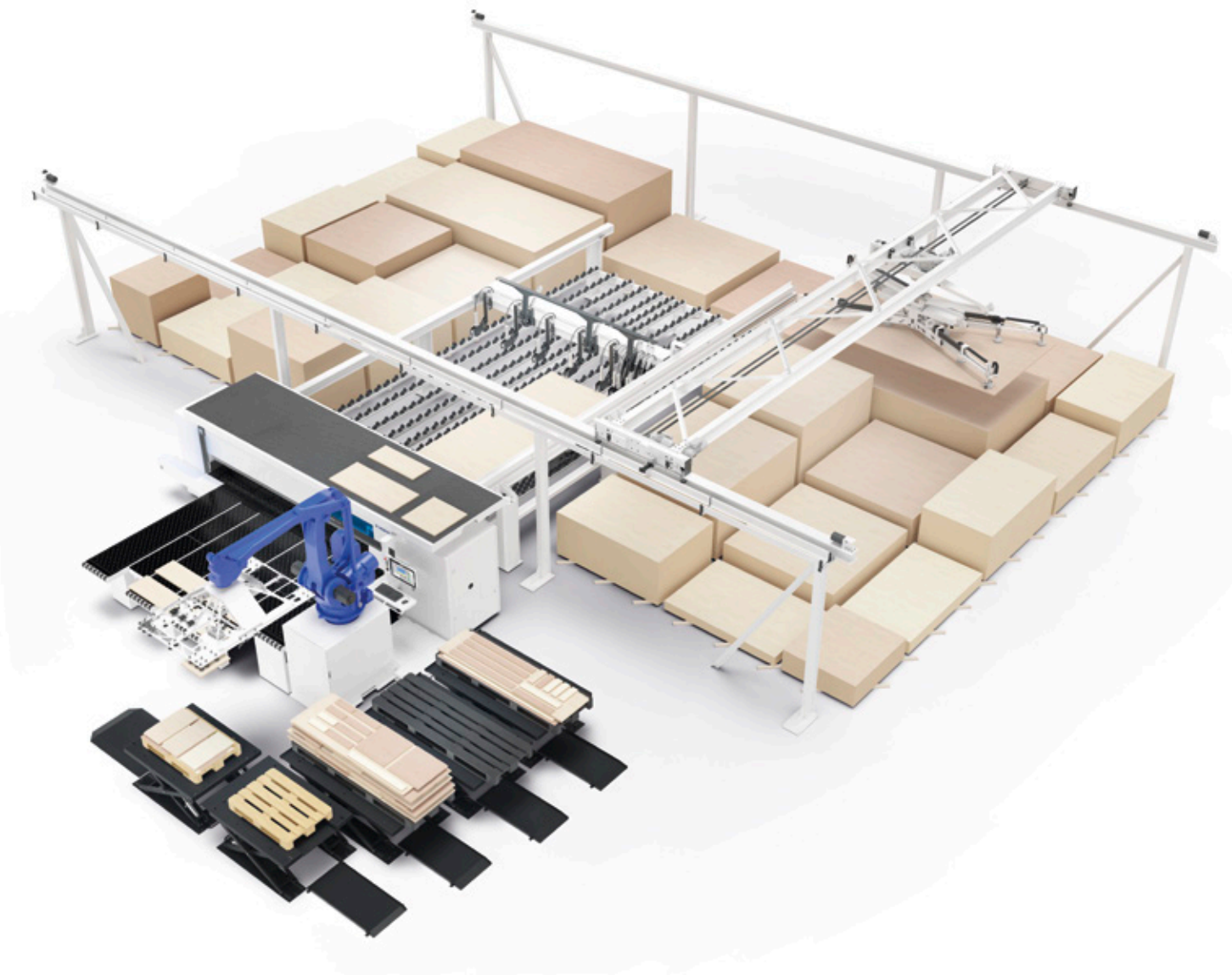
Innovative edge processing
EDGETEQ S-500 profiLine with 2 robots

Integrated workpiece handling with high level of automation. Workpieces are fed in by a robot before a second robot removes them and places them on the return conveyor belt. Finished workpieces are stacked on a pallet. The pallets are then transported to the next machine via a driverless transport system to ensure a connected material flow with high output.

The performance and equipment of the EDGETEQ S-500 profiLine are freely configured from the profiLine module series. It is ideal for precisely gluing all edging types and delivers a high output. It is also capable of handling the wide variety of materials that can be processed in this cell. Workpiece infeed systems guarantee a precise and economical feed of workpieces.

| EDGETEQ S-500	
Workpiece thickness min/max (mm)	10/60
Edge thickness min/max (mm)	0.3/3
Part dimensions min. (mm)	120 x 240 oder 60 x 300 (optional 40 x 280)
Part dimensions max. (mm)	1,200 x 3,000
Total machine length (mm)	11,365 plus 2,500 for WZ08 plus tables for feeding and destacking
Working height (mm)	950
Compressed air connection (bar)	6
Total connected load of machine (kW)	57

▪ 25 cycles/minute, workpiece throughputs/minute, number of edged workpiece sides/minute, workpiece length 1,000 mm

2

COMPACT INFO:

- Feed rate 16 – 25 m/min
- Joints with workpiece diameter 125 mm with horizontal and vertical adjustment options
- Gluing unit for coil material with 12-box magazine
- Gluing option for airTEC;
  EVA and PUR, each with pre-melting unit
- PK25 snipping unit with pneumatic chamfer/straight adjustment and flush/overhang snipping
- Edge profiling with MF21, FK30/V20 and MN21 for automatic profile change for 3 radii and chamfer
- Finish with FA20 glue joint scraper and automatic adjustment for foil thickness
- SF21 standard trimming unit with automatic horizontal and vertical adjustment for producing grooves on the edge banding machine
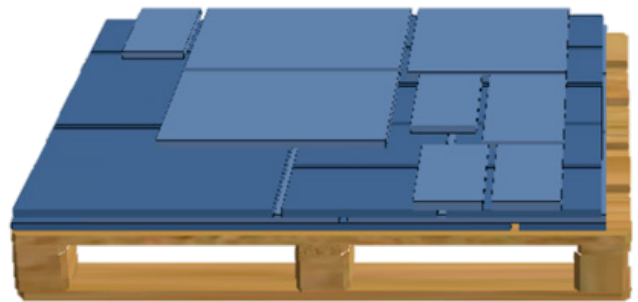
Stacking
intelliStack

Stacks are often used in the furniture industry to decouple production processes. Automated systems previously limited users to single-variety or linear stacks. With intelliStack, it is now possible to create and remove so-called chaotic stacks according to the Tetris principle This leads to a very high stack density, which both reduces the number of necessary stack transports and provides the required stability.

FUNCTIONS:

- Robot calculates the generation of chaotic stacks
- Robot calculates the removal of parts from a chaotic stack
- Ensures stack stability during generation, removal and transport
- Takes the stack's center of gravity into account when transporting on driverless transport system
- Use of buffers optimizes package density
- Optimized part sequence in a stack

HOW YOU BENEFIT:

- Fewer stacks requiring transport
- Increased stack stability during transport
- Use of stacks as buffer decouples systems and cells

C
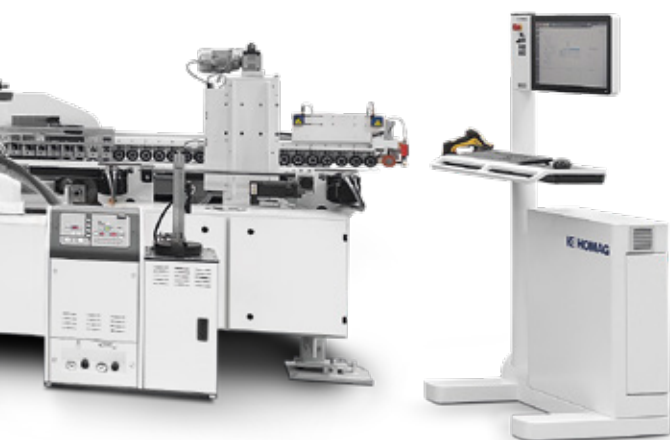
3

Smart case processing
2 X DRILLTEQ V-200 with robotic feed

DRILLTEQ V-200	
Workpiece length (mm)	200 - 2,500/200 - 3,050
Workpiece width (mm)	70 – 850
Workpiece thickness (mm)	8 - 56
Total machine weight (kg)	approx. 1,580

per machine
- Part output: 300-400 parts per shift
- 13 vertical high-speed drilling spindles, incl. drill bit quick-change system
- 4 horizontal high-speed drilling spindles in the X direction
- 2 horizontal high-speed drilling spindles in the Y direction
- Grooving saw in X direction, dia. 100 mm
- Tool change spindle 10 kW HSK 63
- Automatic tool change magazine with 4 slots
- Plausibility check
- Length-dependent processing in X
- Full software package incl. barcode software

Packaging made easy
PAQTEQ C-250

The PAQTEQ C-250 produces cardboard packaging fully automated, just-in-time and in the required quantity. It handles raw materials responsibly to minimize packaging and filler material. It is suitable for any batch size, from batch size 1 to mass production.

- Customized packaging minimizes transport damage and protects products
- Just-in-time production drastically reduces storage and logistics costs
- Ability to act faster (no delivery times and minimum order quantities for purchased cardboard)
- Flexible cardboard feed system with automatic access to up to 12 different web widths
- Cutting optimization through automatic web width selection and cardboard rotation (waste prevention)
- Easy and intuitive control with intelliCut control software
- Direct connection to PAQTEQ-Shop.com with over 230 packaging designs

PAQTEQ C-250	
Packaging length, outward transport (mm)	min 300
Packaging width, inward transport (mm)	Single sheet 350 – 2,500
Endless cardboard, single (mm)	350 – 2,500
Endless cardboard, side-by-side (mm)	max 2,350
Stack height incl. 120 mm pallet (mm)	2,150
Cardboard thickness (mm)	2.0 - 7.0 +/- 0.2
Cardboard quality	
Single-wall corrugation, thickness up to (mm)	approx. 4.0 (quality 1.10 - 1.40)
2 correlation, thickness up to (mm)	approx. 7.0 (quality 2.10 - 2.30)

4

E

Machine monitoring
MachineBoard

BENEFITS:
- Simple overview across all machinery, everywhere
- Push notifications for alerts
- Machine reports when production is complete
- Greater flexibility in day-to-day work
- More time in day-to-day work

FEATURES:
- Push notifications
- Real-time machine data and status
- List of errors, warnings, maintenance measures and actions
- Display of remaining production time

D Manufacturing execution system
ControllerMES

WHAT YOU NEED:
- Data quality from the upstream system is insufficient for automated production
- Upstream system cannot map the production process and has no or insufficient planning function
- Lack of continuous production and finishing organization
- Lack of transparency in performance and order progress
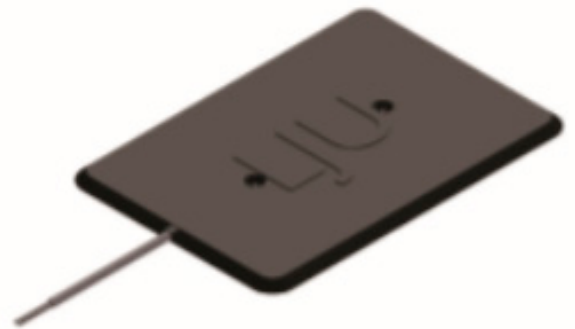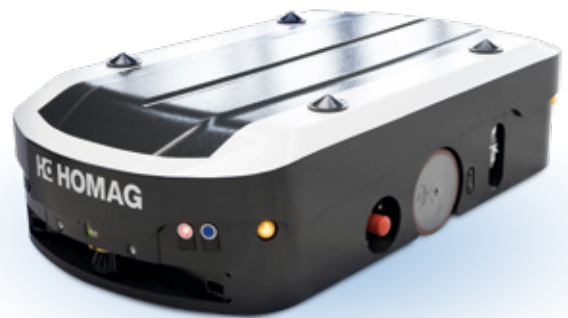
HOW THE SOFTWARE HELPS:
- Data generation and expansion with DataConfigurator
- Fine planning production and batch formation
- Visualization and monitoring of production progress
- Support for production organization: finishing, worker information system
- Organization of material flow, generation of transport orders for the TRANSBOTs

HOW YOU BENEFIT:
- DataConfigurator guarantees data quality for batch size 1 production: Unique Part ID, edge banding machine & cutting data
- Increased production productivity thanks to optimum planning, automation and organization
- Transparent production: dashboards, part tracking and order progress
- Cutting-edge MES system for the furniture industry – an investment for the future

The driverless transport system TRANSBOT provides logistical connection for individual processing machines, automated cells and manual workstations. The autonomously driving transport robots navigate freely in the space, with no need for mechanical aids like rails. This is automation without strict chains or systems. The scalable system therefore creates entirely new possibilities when it comes to connecting production facilities, offering the freedom required for future development.

- No searching times and minimal fetching times: logistics decoupled from direct machine operation, virtually 100 % availability, 24/7 processing possible
- Ability to react quickly: simple downstream changes to product spectrum, processing sequence and production
- Scalable and modular: Subsequent expansion easy, provides transparency and structure in the production process
- Higher process reliability Contour guided, reflectors increase precision
- Safety: constant scanning of environment

Dimensions Length 1,240 mm Width 695 mm Height (min.) 340 mm Height (max.) 400 mm	**Empty weight** 293 kg	**Operating times** (max.) 24/7 (from 2 TRANSBOT)	**Type of navigation** Contour-led, increased accuracy thanks to reflectors
Turn radius 1250 mm unloaded	**Output** Max. load capacity 1,200 kg Max. travel speed 60 m/min Acceleration 0.5 m/s² Positioning accuracy +/-15 mm Pick-up and set-down time 2.2 sec.	**Protection class** According to EN 60529 IP32	**Power supply** AKM lead-gel battery set: voltage 48 V, capacity 46 Ah, weight 48 kg, electronically monitored battery charging

FAQs | Digital solutions

THE BASICS

What are "digital products"?
We use the term "digital products" to refer to our latest generation of smart software and hardware. These are mainly apps and digital systems that make life in the workshop easier at various points. When it comes to hardware, we don't just mean the machines themselves, but also things like intelligent sorting shelves.

What is the difference between tapio apps and digital products from HOMAG?
tapio apps offer you basic functions for the machinery and service environment (such as transparency over your machine park and service solutions). HOMAG's digital products provide assistance in your order and production processes, while also offering smart hardware such as intelligent sorting shelves.

BASIS & COMPATIBILITY

Why does HOMAG use a cloud solution?
HOMAG uses the cloud for its new digital products so that you do not have to invest valuable working time installing and maintaining software and hardware. Above all, you save time spent on maintenance, as the apps are automatically updated via the cloud.
Another benefit of cloud-based software solutions is that they can be used on virtually any mobile device and do not require particularly high processing power. That is because we take care of this for you in the cloud.

What do I need in order to use these apps?
Our digital products are browser-based applications. This means they can be used regardless of your operating system and on various different end devices, from PCs and laptops to tablets and smartphones.

What do I need in order to use the apps on a PC?
If you want to use the apps on your PC and laptop, all you need is an up-to-date browser and an internet connection with a bandwidth of at least 16 MBit/s (min. DSL 16,000). We recommend using Microsoft Edge or Google Chrome.

What do I need in order to use the apps on a mobile end device?
Wireless use on your tablet or smartphone in the workshop requires a WiFi network. If you wish to use the products via a mobile network provider, this should provide a bandwidth of at least 3G (UMTS/LTE). The functions of the apps may be somewhat limited on smartphones due to the smaller screen.

Can I integrate digital products into my existing software environment?
Yes, our products are designed to be easily integrated into your existing software environment without the need for cost-intensive adjustments. Flexible data import means that you can easily transfer your cutting data to our digital order folder or cutting optimization system, for example. The cabinetCreator (see page 12) provides MPR programs that you can process on virtually any CNC machine.

Are my existing machines compatible with the digital products in the concepts?
Here are a few common scenarios:
- **Scenario 1:** You do **not have** a HOMAG machine. No problem, our apps function regardless of the machine. For example, you can use the intelliDivide cutting optimization system (page 26) with your manual panel saw.

- **Scenario 2:** You **have some** HOMAG machines in your machine park. We can offer additional functions for these machines. For example, if your SAWTEQ panel dividing saw is registered on the tapio platform, we can automatically apply many of the settings. After optimization, the production data is transferred directly to the machine.

- **Scenario 3:** You use **only** HOMAG machines. This means you can exploit the full potential of our digital products. All machines registered on the tapio platform can communicate with the apps. You can use the toolManager to manage all of your tools and transfer their parameters directly to the machine, for example. This is also true for edge band materials, for example, which you can administer in the materialManager and whose parameters you can transfer to your EDGETEQ.

As you can see, these apps can offer real benefits even if you don't use HOMAG machines. But when combined with our machinery, they can give you even more.

Can I invest in the machines and digital solutions gradually or do I have to buy a complete concept at once?

We let you take the journey to your complete concept step by step with individual modules. You can decide to purchase individual machines, smart hardware, software or digital assistants that communicate with each other. You can then integrate them into your operations where you need them. Most of our digital products can function independently of each other.

DATA PROTECTION & PRIVACY

Is my data safe in the cloud?

Absolutely. Our digital products fulfill all data protection requirements. Our apps use the Azure platform from Microsoft, with multiple redundant systems. All communication with machinery and in the browser is encrypted. Our privacy notice provides further information about how your data is used and protected. You can read this at www.homag.com/privacy.

How is my data protected against unauthorized access?

All communication with machinery and in the browser is encrypted. Your data is saved on professionally protected cloud infrastructure that is regularly checked and certified according to market standards for IT security.

Which data is collected and processed?

Data is also collected and transferred to us by tapio, in order to provide services. This data is primarily your user name, user contact data and machine data (master data, process data), which is required in order to provide services. Your data is anonymized or pseudonymized when it is used to optimize services and to modify machinery and processes.

DATA STORAGE

Where is my data saved?

Your data is saved in the cloud in an area specially set up for you. The term cloud refers to a type of IT infrastructure provided via the internet. We use the Azure cloud servers from Microsoft. Our servers are located in Europe and are therefore subject to strict European data protection regulations.

Where is my output data (such as the optimized cutting plans) stored?

All data is stored in the cloud in an area specially set up for you. You can save output data like MPR programs or cutting plans locally on your PC or laptop and distribute it from there.

Which data protection regulations are applied when processing my data?

Your data is processed in line with the strict European General Data Protection Regulation (GDPR). Among other things, this means that you can have your data deleted completely should you wish.

Overview | Where our digital solutions are used

	SHOP SOLUTIONS	ORDER CREATION	WORK PREPARATION
CARPENTERS/CABINET MAKERS < 10 EMPLOYEES			cabinetCreator
			woodWOP
INTERIOR DESGINERS, FITTERS, SHOP DESIGNERS, CARPENTERS/CABINET MAKERS > 10-50 EMPLOYEES	woodNet	woodCAD|CAM	productionManage...
			woodWOP
			toolManager
			materialManager
SMALL & MEDIUM-SIZED COMPANIES, SUPPLIERS, VARIANT MANUFACTURERS	Designer3D	Configurator3D	ControllerMES
			woodWOP
			toolManager
			materialManager

Software

woodNET:
- Configure and sell furniture online. Innovative e-business solutions for furniture producers or retailers

woodCAD|CAM:
- Full software solution for 3D design and production of furniture and interior fittings

woodWOP:
- Simple CNC programming software for workpieces in 3D

Configurator3D:
- Transfer order data directly from the point of sale to production. Individual 3D furniture configuration to simplified order processes thanks to easy acquisition and management

CutRite
- World's leading software for optimizing the cutting of panel-shaped materials

Designer3D:
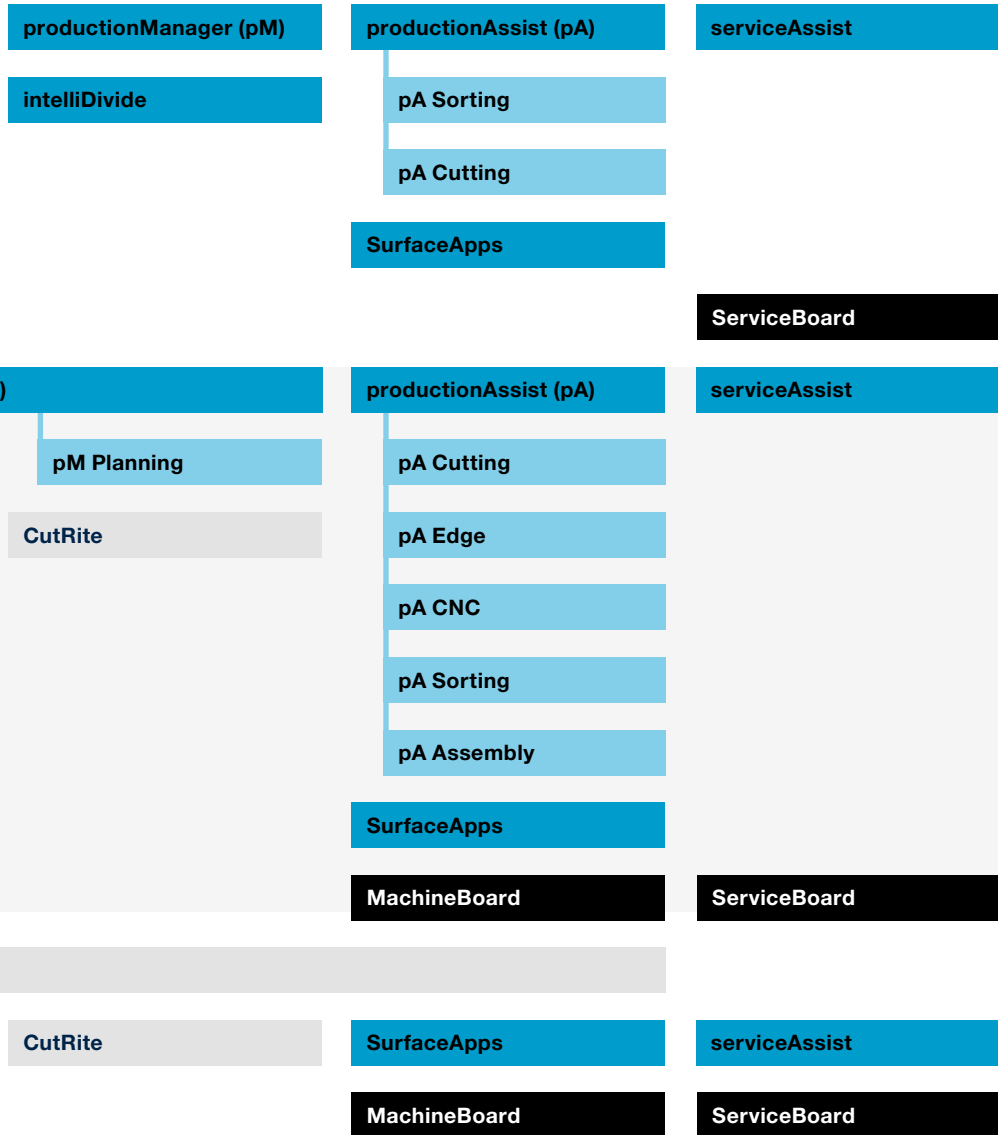- Design software for the sale of furniture and interior fittings

ControllerMES:
- Networked connection for machinery and production processes. ControllerMES offers a modular, scalable and flexible software platform that provides perfect support for all your processes, from product data configuration to the completeness check after final assembly

PRODUCTION PLANNING	PRODUKTION	SERVICE
productionManager (pM)	**productionAssist (pA)**	**serviceAssist**
intelliDivide	**pA Sorting**	
	pA Cutting	
	SurfaceApps	
		ServiceBoard

r (pM)	**productionAssist (pA)**	**serviceAssist**
pM Planning	**pA Cutting**	
CutRite	**pA Edge**	
	pA CNC	
	pA Sorting	
	pA Assembly	
	SurfaceApps	
	MachineBoard	**ServiceBoard**

CutRite	**SurfaceApps**	**serviceAssist**
	MachineBoard	**ServiceBoard**

APPS

cabinetCreator
- Web-based case furniture configuration
- Library with basic shapes such as straight cabinet, corner floor cabinet, sloping ceiling cabinet and furniture hardware

intelliDivide
- Optimize cutting calculations
- Use of multiple algorithms results in faster process and reduced material consumption

toolManager
- Manage tools and use them in the machines
- Transfer tool parameters to the machine

materialManager
- Manage materials
- Transfer material parameters to the machine

serviceAssist
- User assistant systems that support operators during service
- Guided supported maintenance

productionManager
- Overview of all orders/batches and components
- Order information available everywhere and at all times

productionAssist
- User assistant systems that support production staff at different workstations
- The right content at the right time in the right place

SurfaceApps
- Tools to work more efficiently
  - intelliCoating
  - intelliLaminating
  - intelliMoulding
  - intelliSanding
- These SurfaceApps are free digital multifunction tools.

tapio

MachineBoard
- Display of real-time machine data and status
- Push notifications for when machine operator is required
- List of current notes and actions
- Display of remaining time until next action

ServiceBoard
- Live video link or screen transfer possible
- Receive push notifications from service partner
- Maintenance overview of all machines from different manufacturers and suppliers
- Identify machine standstill immediately in the event of servicing

Digital solutions | How you benefit

Independent of hardware and operating system.
- Can be used on stationary and mobile devices with internet access
- "Bring your own device" – use your existing devices
- Compatible with iOS, Android, Windows, Mac OS and more
- Use anywhere and at any time

Low entry price and always up to date.

Apps:
- Software always up to date
- Full cost transparency – only pay for what you use
- No update or maintenance costs

Hardware:
- No investment costs, as you can use most of your existing hardware
  (PC, Tablet, Smartphone)

Direct data transfer and machine response.
- "tapio connected" machines communicate directly with the apps
  - Apps and machines easy to set up
  - Send jobs to machines at the click of a button
    (e.g. transfer of cutting plans)
  - Reporting of results and statuses

tapio
Partner

How do we use tapio?
tapio is the open ecosystem in the woodworking sector.
tapio provides a technology platform for manufacturers of machinery, tools and materials that allows them to offer services and digital solutions for you. ....
www.tapio.one

tapio…
- …the marketplace where you can purchase our apps
- …the platform where different partners can store their master data
  (e.g. tool data)
- …access and manage your digital products
- …connect your machinery to the cloud:
  - Communication between machinery and digital products
  - Send orders to machines at the click of a button
  - Reporting of results and statuses

Digital solutions | Highlights

Open system.
- Import from industry software
- Compatible with older machines that are not tapio ready
- Apps also suitable for manual workstations such as assembly and painting

Not bound to specific software systems.

Simple and smart control.
- No complex installation and configuration
- Just like using satellite navigation in your car – the user still chooses the destination.

Intuitive to use and easy to learn.

Make your production more efficient.
- Digital assistants make your life easier
- Process your orders faster
- No more wasting time looking for parts or information
- Fewer errors and better quality
- Transparency in production

**Process your orders faster, more reliably and in higher quality.**

Continuous solution.
- One supplier for machinery, smart hardware and apps
- Modular expansion
- Compatible interfaces

HOMAG is the only provider to offer complete solutions along the entire process chain.

Training | Courses and webinars

Boosting productivity requires expertise in technology and craftsmanship. The best way to increase the efficiency and output of your business is through well-trained employees. Alongside training for new machines and software, we offer you and your team continuous professional development courses and qualifications. We are constantly developing our training courses and can tailor these precisely to your needs, meaning you'll be well equipped for the challenges of today and tomorrow.
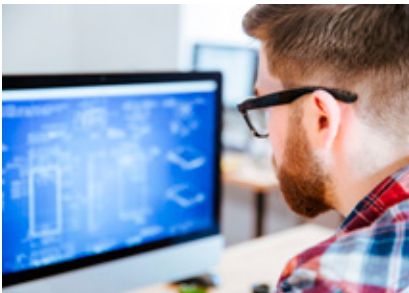
Hands-on training on the machine
When you invest in new machinery, we can train your staff to use the new control system, software or machine technology. Our efficient and tailored practical training can quickly familiarize you with operating and -programming the machine. You can get started right away and quickly achieve greater productivity.

Training events & updates. From new machine features and software updates to tips and tricks that make your day-to-day work easier, we can keep you and your team up to speed with the latest developments. This means your business will always be up to date.

Online-Trainings. We also offer webinars on suitable topics. In these events, the trainer and participants meet online in a virtual training room. As well as saving costs and travel time, this kind of digital learning can be done anywhere.

45 TRAINERS WORLDWIDE

OVER 2.000 PARTICIPANTS PER YEAR TRAINING AVAILABLE IN

80 COUNTRIES AROUND THE WORLD

Consultation | Your partner for everything

WE WANT TO HELP YOU SUCCEED.

Success is about recognizing opportunities when they come, choosing the right measures and being consistent when putting them into practice. It is always useful to check your existing processes and systems, even if they seem to be working well. This is the only way to discover and unlock new potential.

As experienced master cabinetmakers, wood engineers, project managers and business managers, we are deeply rooted in the woodworking industry. We all contribute our experience to your project and are here for you as reliable and responsible partners.

We work together with you to develop tailored systems and provide support with new ideas and alternative paths to success. We develop practical solutions along your entire process chain, individually customized to your plans, products and goals.

Take the decisive step with us and secure real competitive advantages for the long term. Achieve a sustainable improvement in your KPIs by leveraging and implementing its potential.

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