

## **Economical batch size 1 production**



**Secure your future and your competitive standing with our solutions**

# Batch size 1 production – individually tailored and highly flexible solutions from the HOMAG Group



Warehousing technology and transport logistics



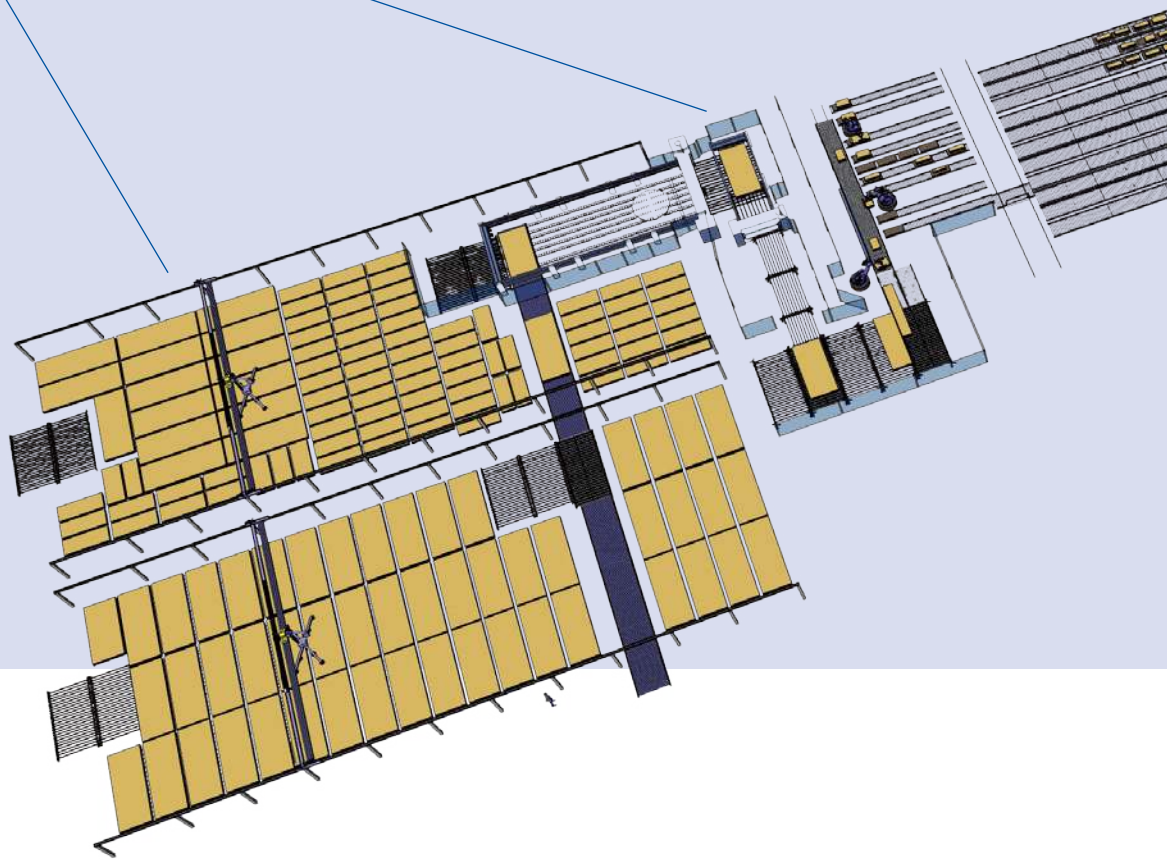
Optimization, cutting/nesting and part identification



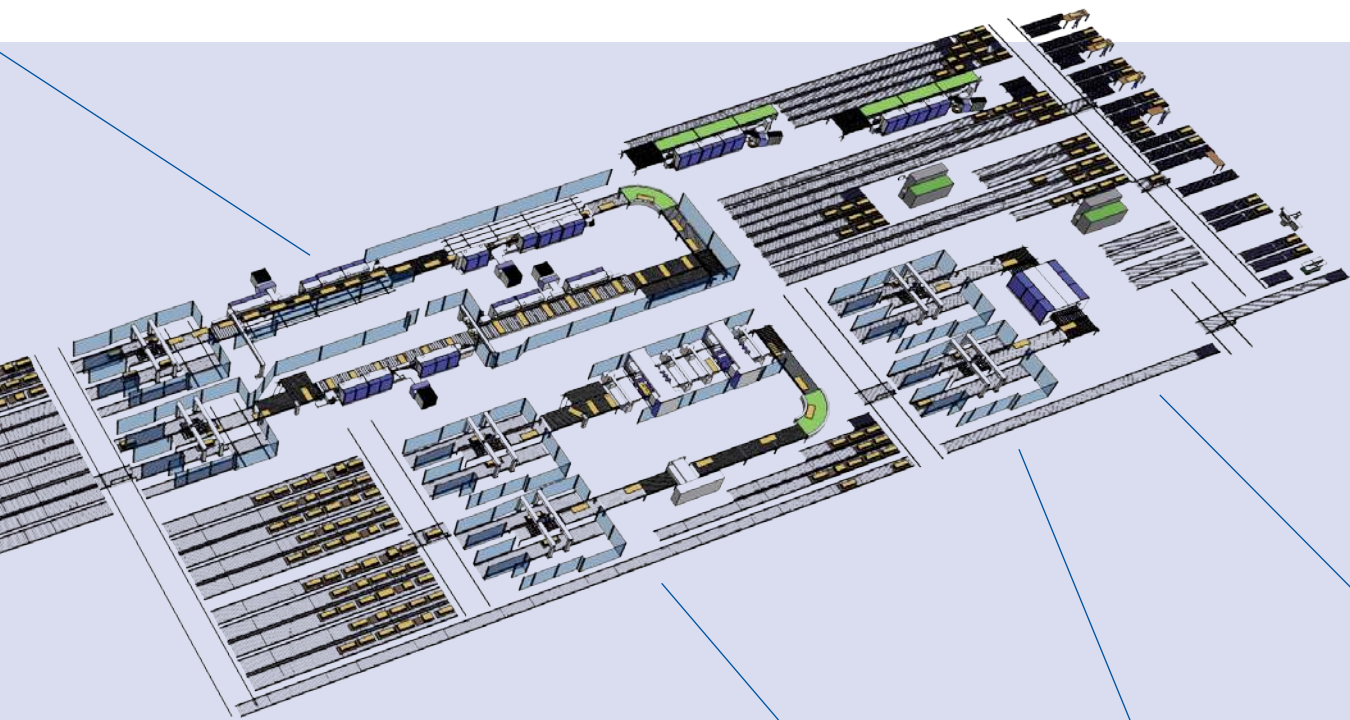
Buffer storage system



Sizing and edge processing



Your ability to stay ahead of your competitors and secure your company's future can hinge on finding the optimum underlying concept for your new production line. Particularly in these times of high variant diversity, keeping production costs competitive through the optimum use of resources, short throughfeed times and minimal inventories can make that decisive difference. Finding the most suitable production philosophy to meet your needs is key. HOMAG Group Engineering will guide you through the crucial planning phase with the benefit of outstanding trade-specific knowledge, many years of experience and comprehensive expertise across the widest product spectrum – all from a single source.



Sorting and order picking



Drilling and hardware mounting systems



Assembly technology



Packaging technology

## PRODUCTION PHILOSOPHIES

### Customer-specific production order

Here, the component is produced for a specific customer order. Each component has its own unique number and is assigned to the customer order early on in the production process (label with customer reference). This production method requires a high level of transparency, permitting the use of a manufacturing execution system.

- Longer post-production times
- Exchange of components is very difficult
- Low number of multiple storage processes, consequently lower capacity and dynamic utilization in the buffer, storage or sorting system

### Component-specific production order

The component can be produced for several customer

orders. Each component has its own unique number and is assigned to the customer order at a late stage in the production process (label without customer reference). The high degree of flexibility fundamental to this production method calls for the use of a manufacturing execution system.

- Higher sorting qualities required
- Sorting and order picking at the latest possible stage, as this promotes the longest

flexibility in the part flow (multiple depth storage, change of sequence)

- Post-production parts can be taken from stock if required
- High probability of multiple storage and high capacity and dynamic utilization in the buffer, storage or sorting system
- Sequence of components has no relevance



## Key factors for batch size 1 production

**When implementing new production lines, we aspire to combine variant diversity and batch size 1 production with outstanding economy. HOMAG Group Engineering will devise the optimum machine configuration for your individual requirement, making optimum use of key factors for your success.**

### **Recuts**

Fully automatic recuts during running production increase the economy achievable with batch size 1 production

Your benefit

- Reduced material costs through optimum utilization of panels and minimized cutting waste
- Lower labor costs as manual recuts are eliminated
- Low energy consumption and low tooling costs

### **Decoupling buffer**

These decouple components from processes or block components to ensure optimum preparation of the downstream machine. Entry into and removal from storage take place in multiple layers or lanes. Decoupling buffers are used between dividing and edge application, between edge application and drilling, or within a process step.

Your benefit

- Savings due to optimum material flow
- Reduced downtimes

### **Flexible edge application**

You do not need to abide by any rules in terms of component dimensions. Flexible machines and units ensure the shortest possible changeover gap for edges.

Your benefit

- Optimum productivity

### **Sorting and order picking**

A pre-drilling sorting process makes sense where there are different non-redundant drilling lines and several production routes. A post-drilling sorting process is recommended where automatic hardware mounting restrictions exist, or where parts requiring drilling and parts not

requiring drilling are simply controlled.

Your benefit

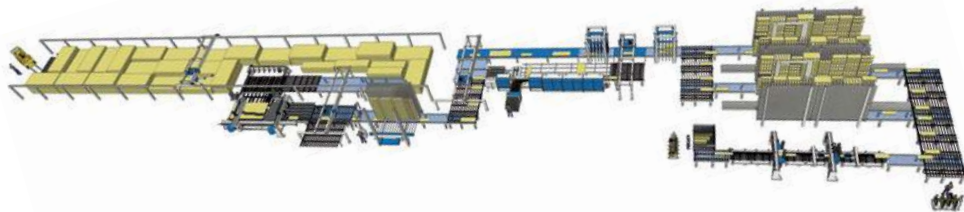
- More efficient, more cost effective production sequences due to higher access to identical parts (parent parts)

### **Networked drilling**

Here, all components remain in a single production flow. The processing dimensions are adjusted by means of suitable machine configuration to the complete component spectrum, e.g. carcasses, fronts or table tops.

Your benefit

- Labor cost savings through reduced organizational intervention by operators
- Less scrap due to reduced component damage as a result of manual handling
- Higher level of usage



Storage system

## The right information at the right time

As well as requiring efficient and flexible machines, batch size 1 production really comes into its own through the use of an intelligent higher-level manufacturing execution system. The HOMAG Group provides this essential ingredient in the form of its Software Manufacturing Organization System (MOS).

MOS provides optimum communication between your ERP system and your batch size 1 production.

Your benefit

- Central database for production
- Supply of data and information to your machines
- Order and part tracking, completeness check
- Control and evaluation of production batches and units

- Management of production routes and deadlines

### Performance category I

400–500 parts/shift\*

### TLF 211



### Performance category II

800–1 100 parts/shift\*

### TLF 411

### Performance category III

1 800–2 200 parts/shift\*

### TLF 411



### Performance category IV

4 500–5 000 (6 500) parts/shift\*

### TLF 411 – 2 bridges



\* = 8 hours




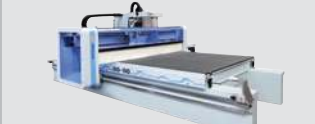

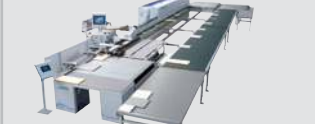

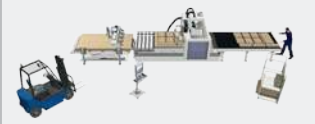

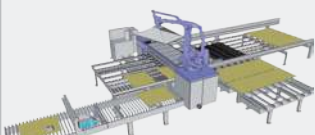


Dividing/cutting

Dividing/nesting

Buffer storage system

Sizing and edging

Sizing and edging

HPP/HPL/HKL	BHP 200	TPK 400	Basic concept 1, 2, 3, 5,	BMG 500
				
	BHP 200	TPK 400	Basic concept 4 or 6	BAZ 700
				
		TPL 220	Basic concept 7	
Individual solutions / Customized scaling		TPL 220	Basic concept 8	
				












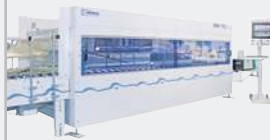
Sorting and  
order picking

Drilling

Drilling with hardware  
mounting

Assembly

Packaging

Robot Sorting Unit	BHX 500	ABH 100	MPH 410	VKV 020
				
Robot Sorting Unit	ABH 100	ABF 600		
TLB 320	ABH 100	ABL 100/210 – ABH 100		
TLB 320	BST 800	ABF 800 – ABL 220	MDE 160	VKV 710
				



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