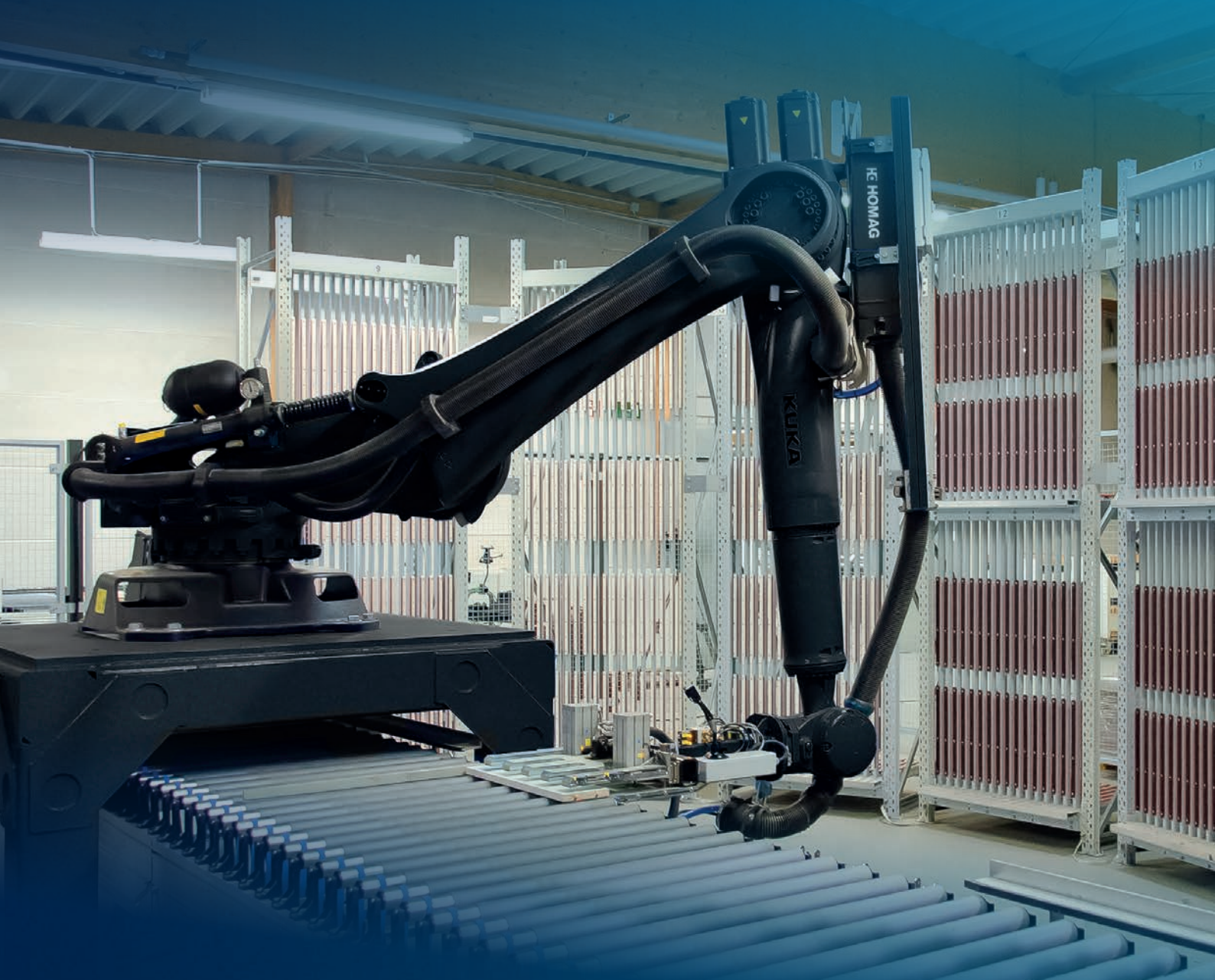


SORTBOT R-300

Robotics

More output without waiting times.







Robotic sorting cells – fully automatic space-saving and scalable setups

Robots ensure product quality and improve workplace conditions. As reliable solution for buffering, decoupling, and sorting, robots enhance production performance and increase yield.

Reliable Workpiece Flow - Robotics Solution by HOMAG

High repeat accuracy and availability makes a robot the central element of a sorting cell and enables production processes able to schedule.

- **Maximum transparency** due to monitoring the precise position of each workpiece
- **Optimum material flow** thanks to free determinable storing and removal strategy
- Flexible component arrangement offers **variable storing capacity**
- **Energy saving handling** by means of gentle gripping technology

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SORTBOT

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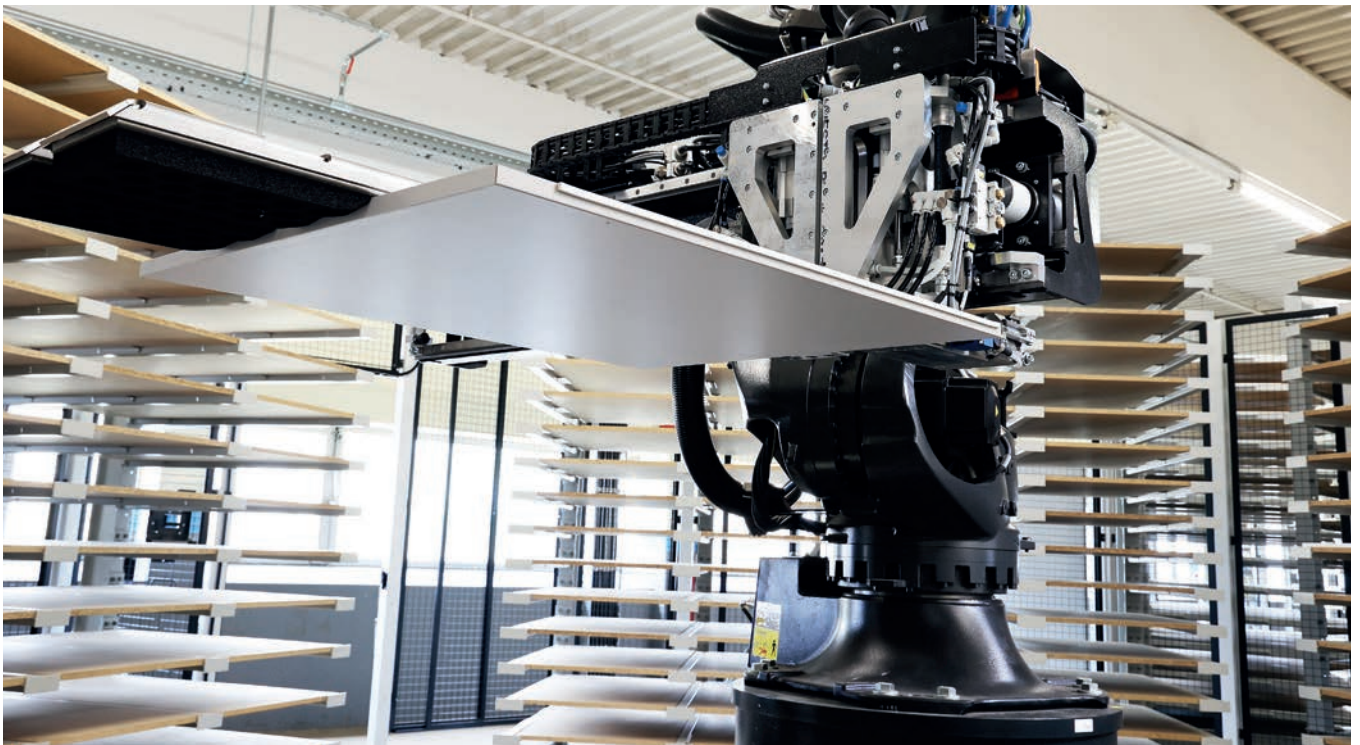
- 04 Horizontal handling
- 06 Technical data
- 08 Vertical handling
- 10 Technical data



Higher volume utilisation through horizontal handling

Sorting is a process step that takes place between different processing steps in both trade and industry. Whether sorting is used to optimise set-up times for the subsequent machining process or to provide the right parts

at the right time for assembly, both are possible. Horizontal sorting by means of robots completes the HOMAG product range and represents an addition with various options.



Highlights:

- **Dynamic width optimisation** within a shelf compartment
- Increase in volume utilisation through **bundle formation** within a compartment
- **90° rotated storage** for optimal depth utilisation of the shelves
- **Two working heights** for higher performance, one level for storage and one for retrieval
- Also suitable as a solution for **low room heights**
- **Bending line correction** for performance-optimised handling of large and/or thin parts

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SORTBOT

**EXAMPLE CONFIGURATION FOR PARTS WITH:
LENGTH 1,000 MM / WIDTH 600 MM / THICKNESS 19 MM (STORAGE OPTIMISED)**

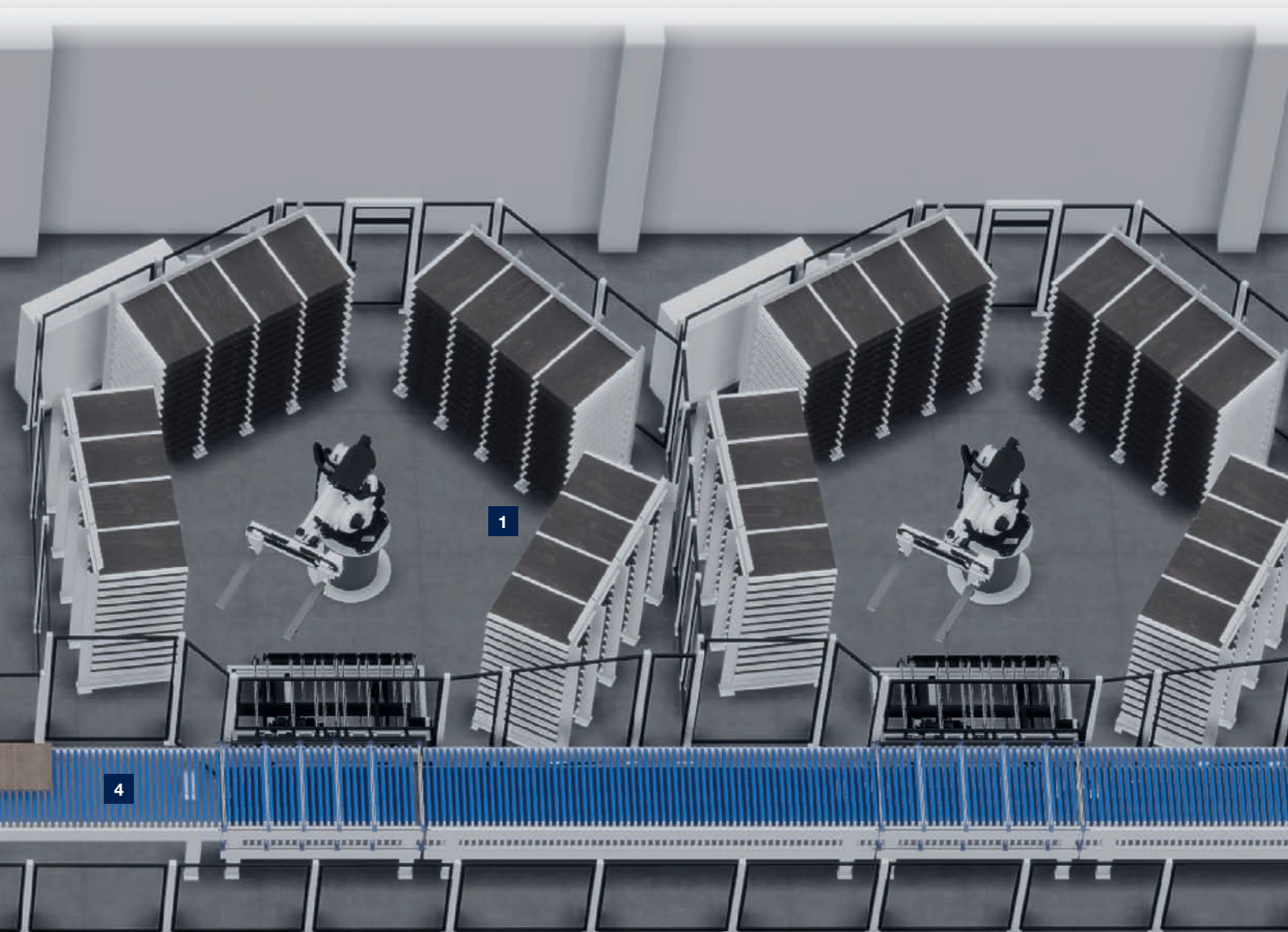
Shelf per cell	Number Levels	Shelf length (mm): corresponds to max. part length	Shelf depth (mm): corresponds to max. part width	Usable stacking height per level (mm):	Parts per level in length:	Parts per level in height:	Sum parts per shelf:	Sum parts per cell:
4	16	3.200	1.200	19	5	1	80	320
4	13	3.200	1.200	16	5	3	195	780

**EXAMPLE CONFIGURATION FOR PARTS WITH:
LENGTH 1,000 MM / WIDTH 600 MM / THICKNESS 19 MM (STORAGE NOT OPTIMISED)**

Shelf per cell	Number Levels	Shelf length (mm): corresponds to max. part length	Shelf depth (mm): corresponds to max. part width	Usable stacking height per level (mm):	Parts per level in length:	Parts per level in height:	Sum parts per shelf:	Sum parts per cell:
4	16	3.200	1.200	19	3	1	48	192
4	13	3.200	1.200	16	3	3	117	468

**EXAMPLE CONFIGURATION FOR PARTS WITH:
LENGTH 2,800 MM / WIDTH 1.00 MM / THICKNESS 19 MM**

Shelf per cell	Number Levels	Shelf length (mm): corresponds to max. part length	Regaltiefe (mm): entspricht max. Teilebreite	Usable stacking height per level (mm):	Parts per level in length:	Parts per level in height:	Sum parts per shelf:	Sum parts per cell:
4	16	3.200	1.200	19	1	1	16	64
4	13	3.200	1.200	16	1	3	39	156



1 Shelves

- Up to 4 shelves in a circle arrangement

2 Infeed transport

- Chain lift magazine (optionally) at a working height from 950–1,000 mm

3 Workpiece measurement

- Bar code reader (optionally)

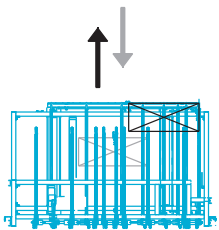
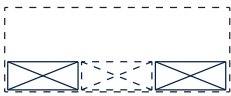
4 Outfeed transport

- At a working height from 1,280 mm

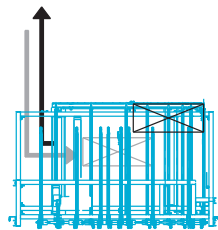
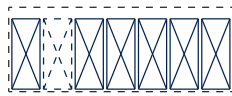
5 Shelf types

- 2 different types possible (single part access with 16 shelves or for package formation with 13 shelves per rack)

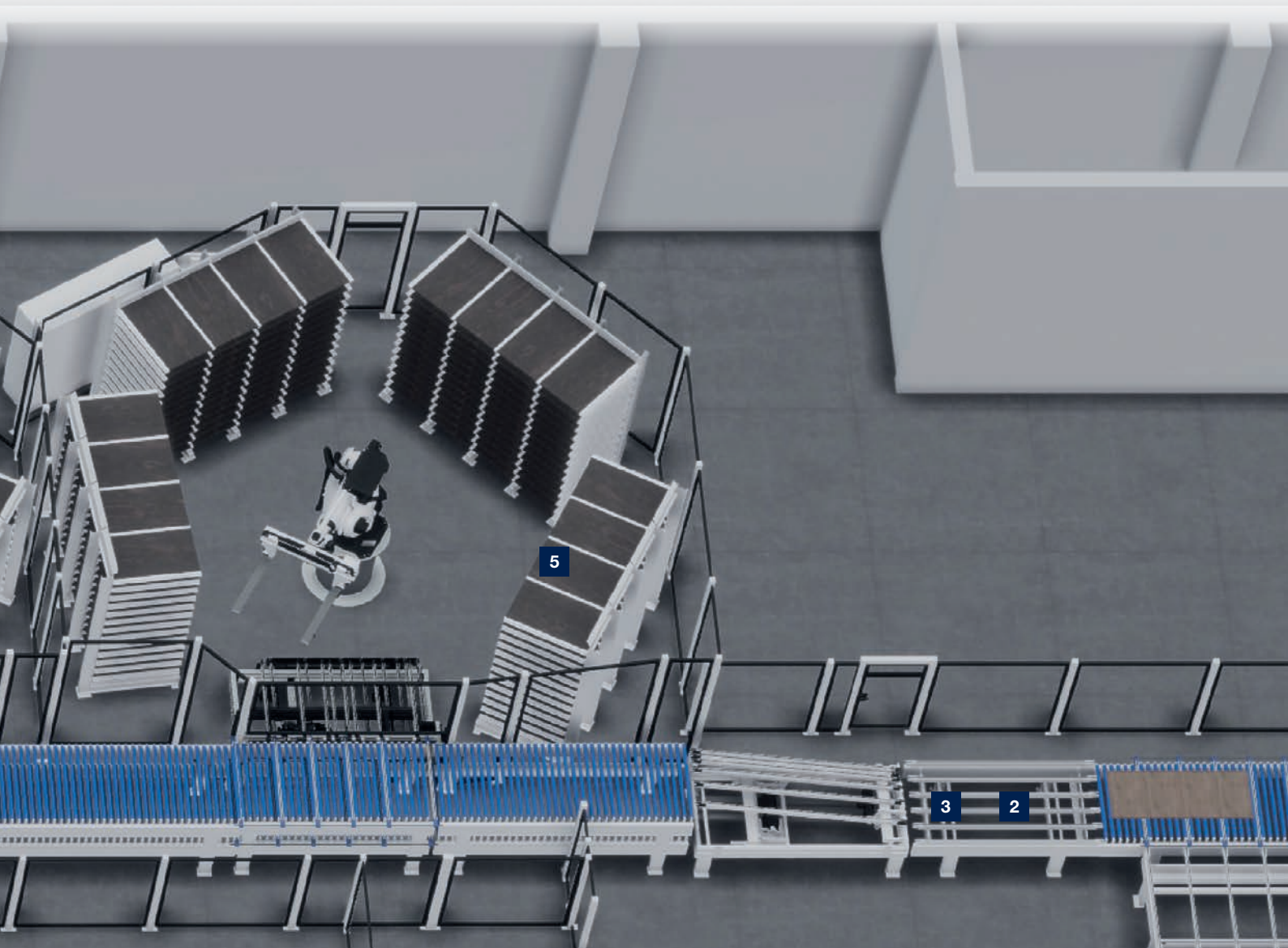
Shelf level unrotated (not optimised)



Shelf level rotated (optimised)



To increase the storage capacity by using the full shelf depth, parts with a corresponding length/width ratio are not stored crosswise but lengthwise, i.e. with the short side leading, in the racks. See graphic on the left. The orientation of the parts during storage and retrieval does not change.





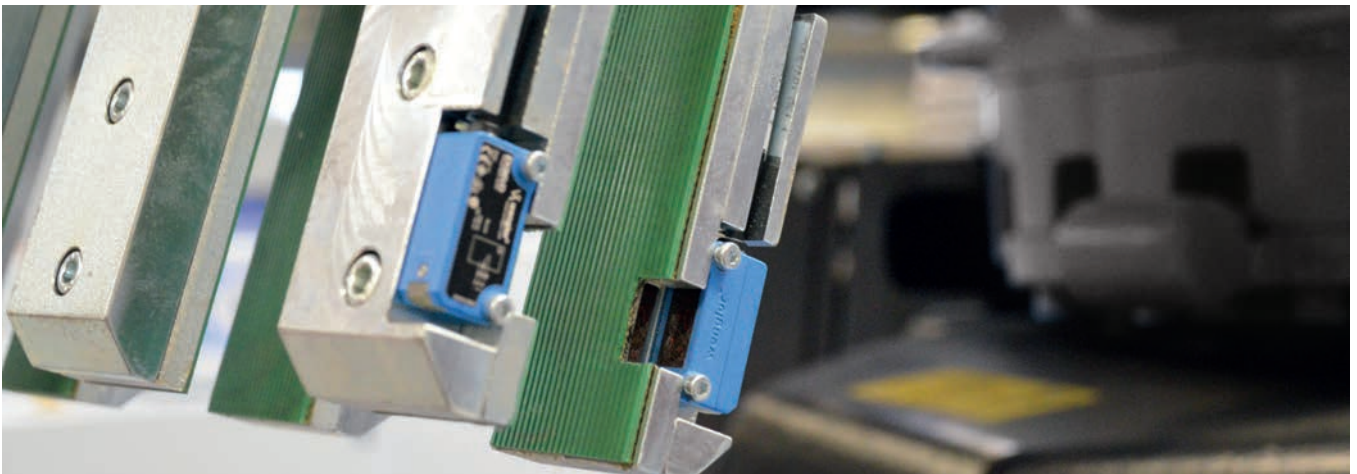
Direct access to each workpiece – **fully automatic.**

Robots are the crucial key to higher productivity and more efficiency. They improve the quality of the products and reduce the use of expensive material and scarce energy resources. The keyword is „direct access to each workpiece, and that fully automated“.

With a robot as central element, the sorting cell can create a maximum storage volume in smallest space. The robot sorts the workpieces flexibly into the different compartments, and thus enables a variable access to parts for the whole production.

„In principle, every customer has to sort his workpieces. By using the cell he can do that automatically and feed workpieces in optimum order to his material flow. Or he will use the cell as central workpiece storage out of which panels are fed to the individual processing stations.“

Christian Heißler - Technology consultant, HOMAG Group



Reliable Workpiece Flow - Robotics Solution by HOMAG

High repeat accuracy and availability makes a robot the central element of a sorting cell and enables production processes able to schedule.

- Direct access to each component allows **high system speed**
- Vertical storage of dowelled parts possible
- Shelving designs adapted to customer requirements
- Narrow parts handling possible on separate racks installed on the floor

MORE: HOMAG.COM



SORTBOT

SHELF TYPE A - TYPE H, SPACES 1 - 16

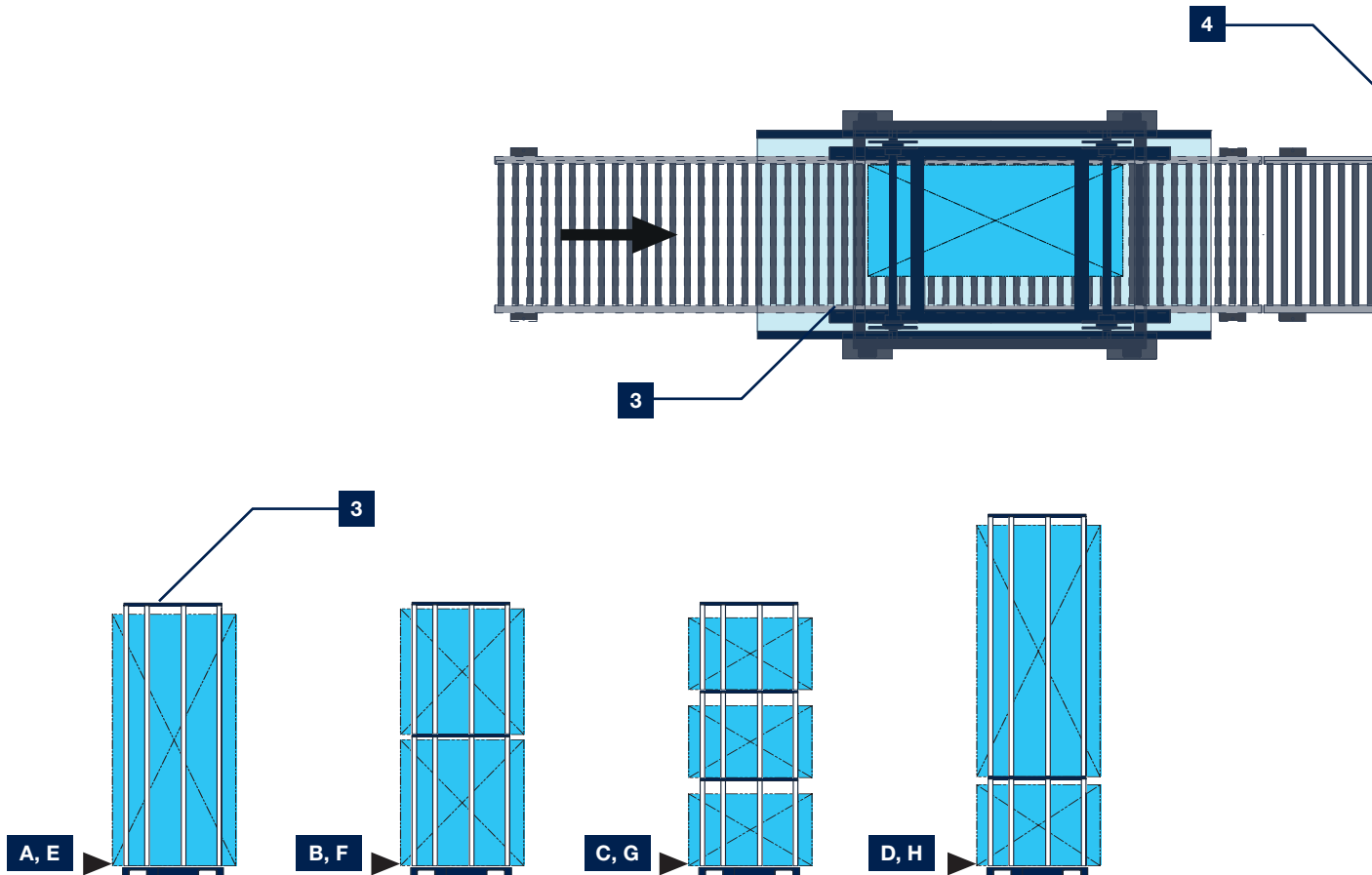
Shelf	Levels	Sheds	Workpiece dimensions			Shelf	Levels	Sheds	Workpiece dimensions		
			length (mm)	width (mm)	thickness (mm)				length (mm)	width (mm)	thickness (mm)
Type A	1	1 x 16	240 - 2,800	240 - 1,000	16 - 19	Type E	1	1 x 14	240 - 2,800	240 - 1,000	19 - 25
Type B	2	2 x 16	240 - 1,400	240 - 1,000	16 - 19	Type F	2	2 x 14	240 - 1,400	240 - 1,000	19 - 25
Type C	3	3 x 16	240 - 800	240 - 1,000	16 - 19	Type G	3	3 x 14	240 - 800	240 - 1,000	19 - 25
Type D	2	1 x 16 1 x 16	240 - 900 240 - 2,800	240 - 1,000	16 - 19	Type H	2	2 x 14	240 - 900 240 - 2,800	240 - 1,000	19 - 25

SHELF TYPE FOR NARROW PARTS, TYPE I - TYPE N, SPACES FOR NARROW PARTS

Shelf	Levels	Sheds	Workpiece dimensions			Shelf	Levels	Sheds	Workpiece dimensions		
			length (mm)	width (mm)	thickness (mm)				length (mm)	width (mm)	thickness (mm)
Type I	1	1 x 15	240 - 600	100 - 240	16 - 19	Type L	1	1 x 15	240 - 600	100 - 240	19 - 25
Type J	1	1 x 10	240 - 950	100 - 240	16 - 19	Type M	1	1 x 10	240 - 950	100 - 240	19 - 25
Type K	1	1 x 11	240 - 1,600	100 - 240	16 - 19	Type N	1	1 x 11	240 - 1,600	100 - 240	19 - 25

Combinations shelf type for narrow parts, type I - type N

	Variant 1	Variant 2	Variant 3	Variant 4	Variant 5	Variant 6	Variant 7	Variant 8
Space S1 - S4	1 x Type K	2 x Type I	2 x Type J	1 x Type N	2 x Type L	2 x Type M	1 x Type I + 1 x Type J	1 x Type L + 1 x Type M
Space S5 - S10	1 x Type I	1 x Type J	1 x Type L	1 x Type M				



1 Shelves

- Up to 16 shelves in a circle arrangement possible

3 Infeed transport

- Chain lift magazine (optionally)

5 Outfeed transport

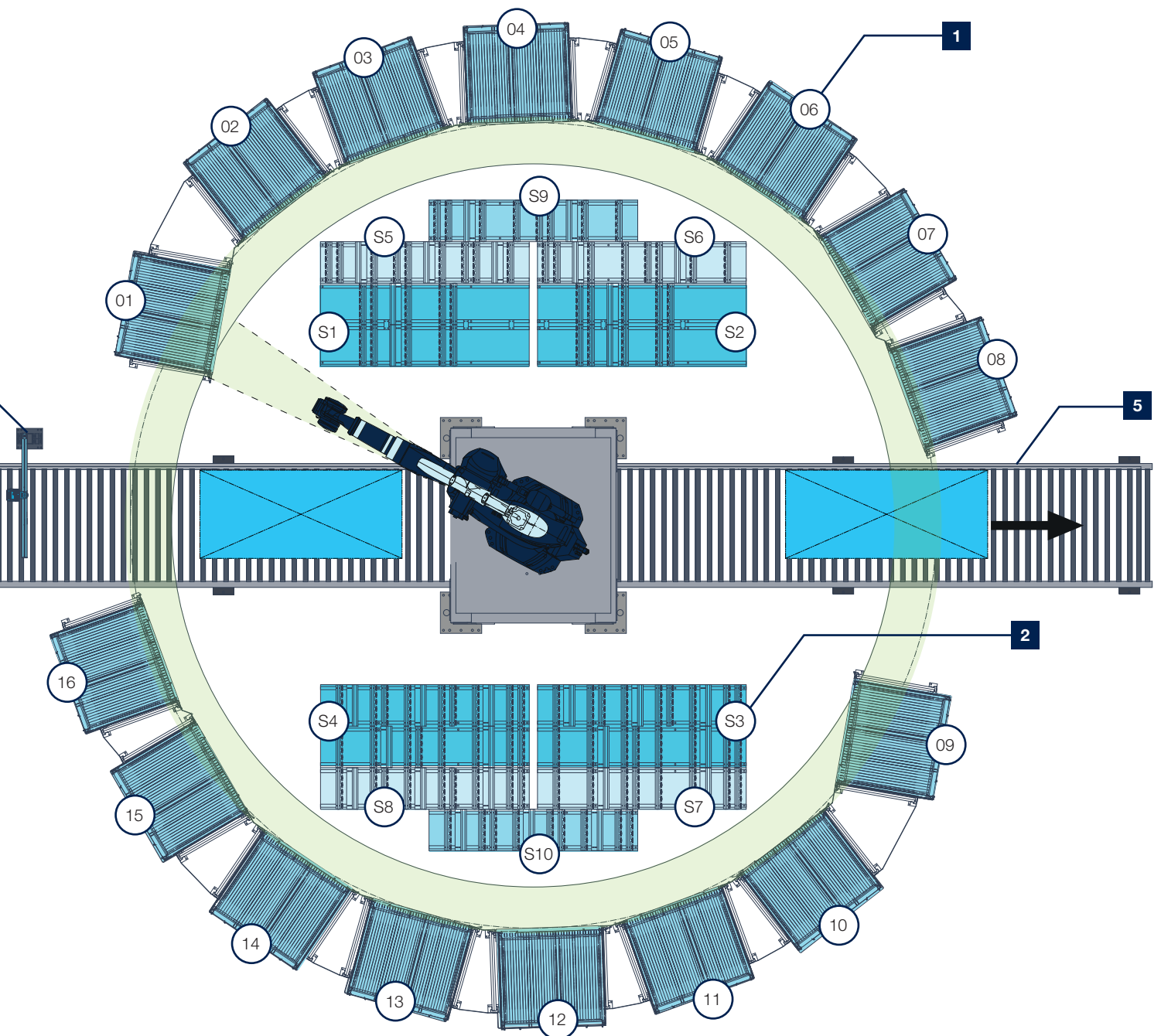
2 Shelf for narrow parts (optionally)

- Shelf combinations S1 - S10 to pick up narrow parts up to a width of 240 mm

4 Workpiece measurement

- Bar code reader (optionally)

6 Shelf types





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