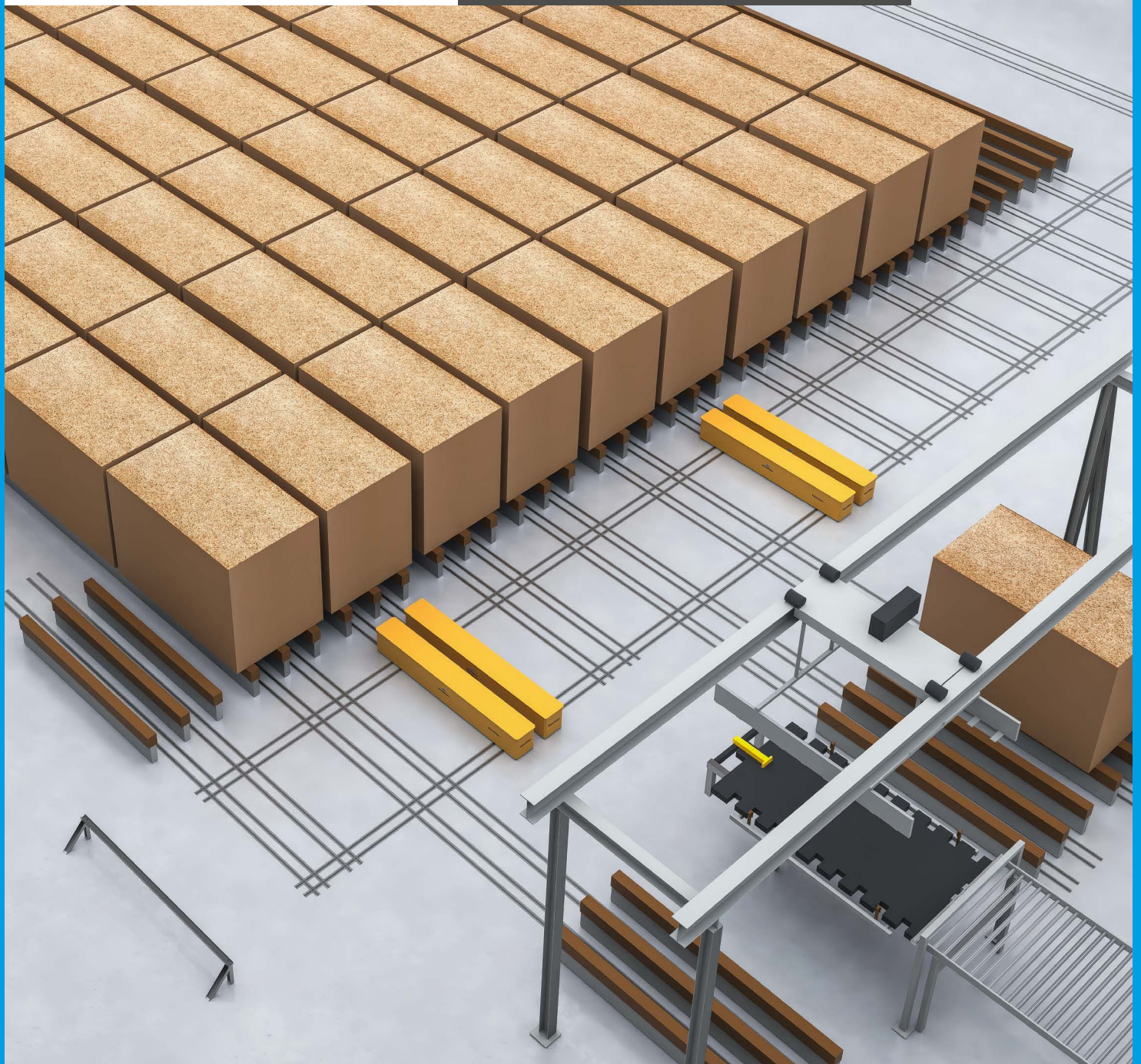


RoundTrack

Intelligent transport
solutions for wood-
based panel plants



RoundTrack

**Wood-based panel plants:
Minimization of downtimes.
Increasing productivity.**

Siempelkamp Transport Systems develops customized transport systems for wood-based material plants. Our goal: process optimization through automation for highly efficient and future-proof production.



↑Exchange

Knife ring Transfer Vehicle.
Transport solution for
changing knife rings.



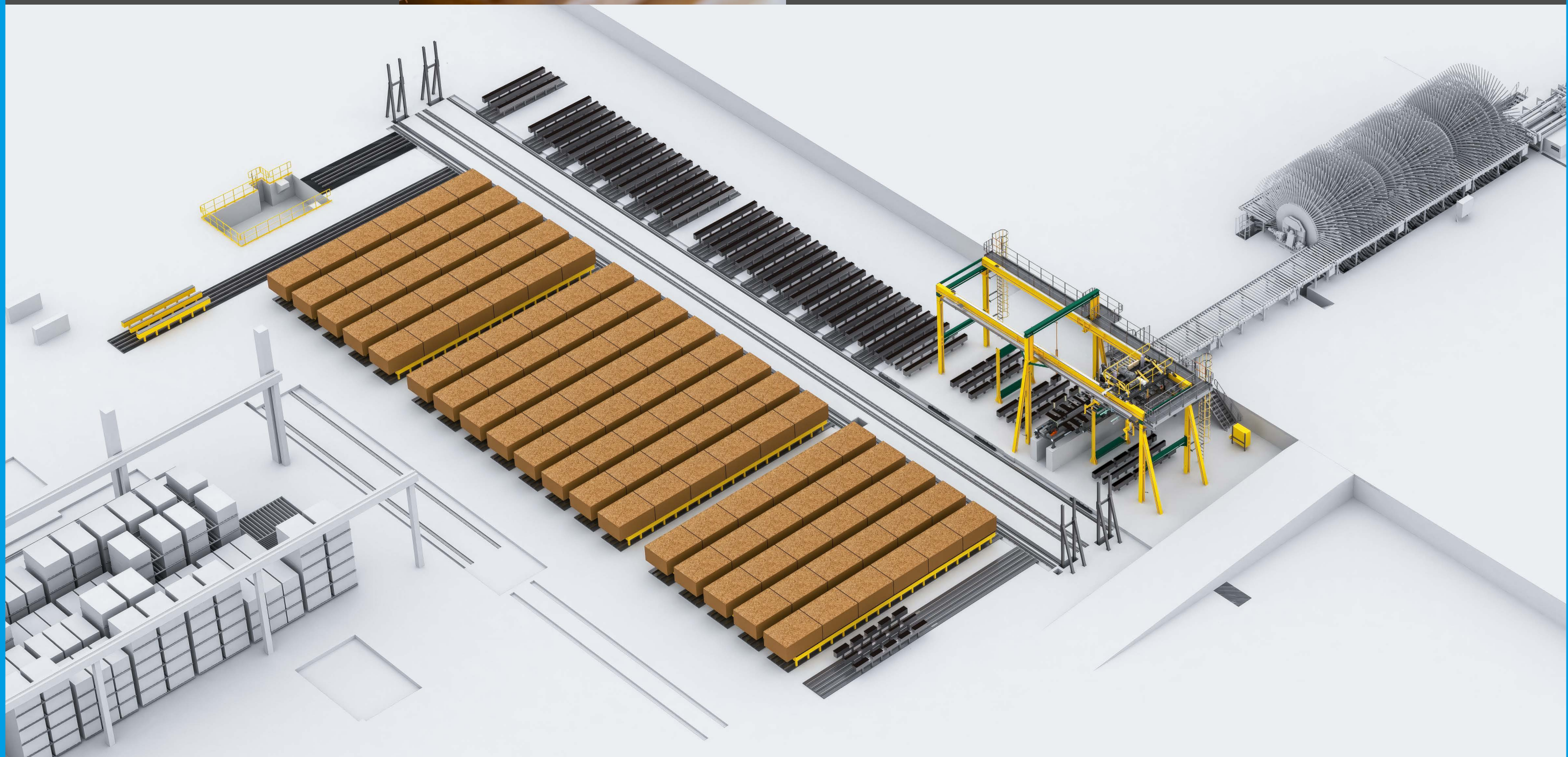
↑TrackSTV

Stack Transfer Vehicle.
Raw panel distribution
trolleys for area storage.



↑TrackBTV

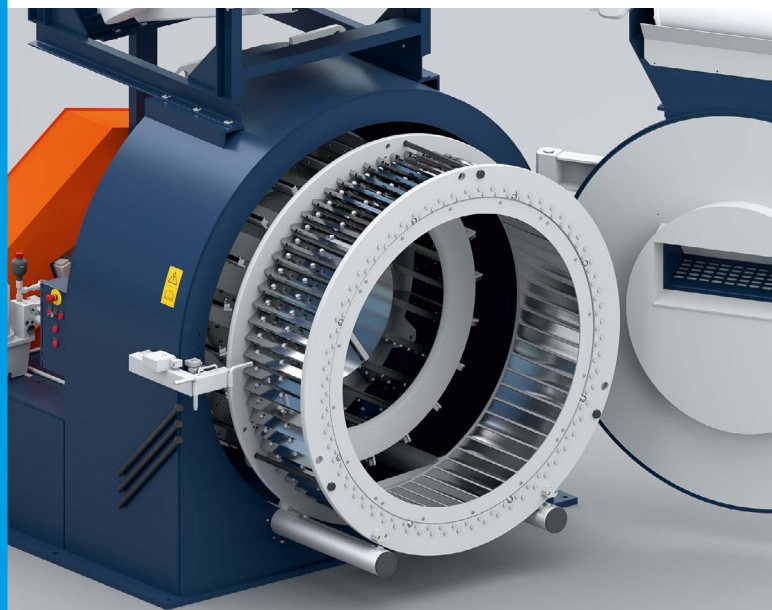
Board Transfer Vehicle.
Transport solutions for
warehouse logistics.



uExchange

The transport system for the ultra fast knife-ring exchange

The knife ring flaker shreds wood chips into high-quality chips. Knife wear means that the cutting rings have to be changed regularly. uExchange is the intelligent alternative to a pallet truck or crane: uExchange transports two knife-rings on one exchange cart - the used one and the reconditioned one. The change takes place in just one step. The advantage: very short changing times and minimization of downtimes.



Technical data

Flaker Sizes PZKR	▪ 14-450, 15-500, 16-600
Knife-ring weight	▪ max. 2 x 2.000 kg
Knife-ring diameter	▪ max. 1.600 mm
Stroke	▪ 325 mm
Stroke speed	▪ 150 mm/min
Cart turning function	▪ Quadro chassis with center lever
Power supply	▪ Battery

90 %

shorter exchange times.
Knife-ring exchange in
record time for maximum
productivity.

100 %

safe handling.
Reliable and safe
during exchange and
transport.

90 %

more efficiency.
50% to 90% more
efficient than
conventional systems.

325 mm

lifting function.
Electric via battery
up to 325 mm
stroke.

180°

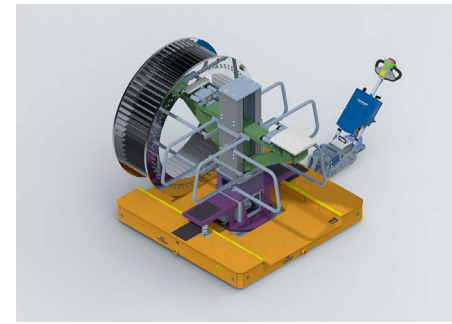
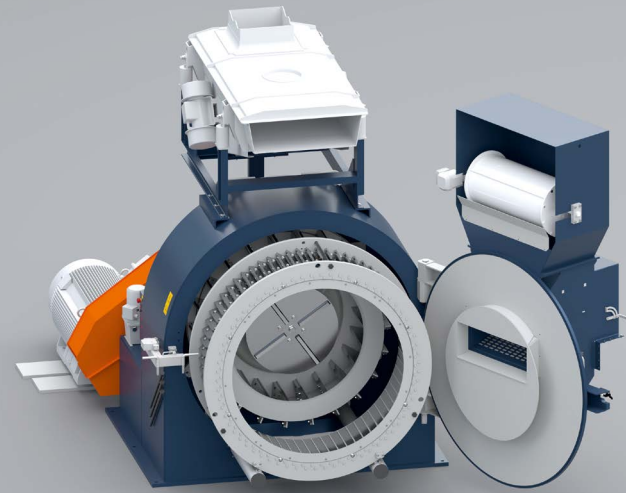
turning function.
Stackable and designed
for an easy and ergono-
mic working process.



Exchange

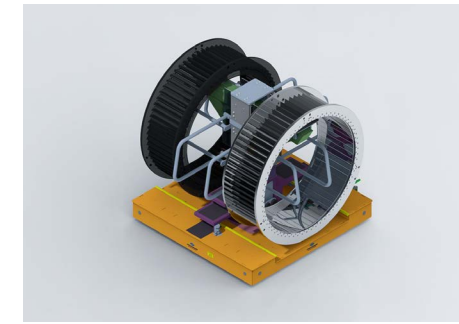
The ultra safe and ultra precise transport system

The track-guided transport system guarantees safe movement of the knife-rings. With the MoviMax mover as an accessory, the transport cart can be moved by just one person. The MoviMax has a smooth drive system for precise positioning of the cart.



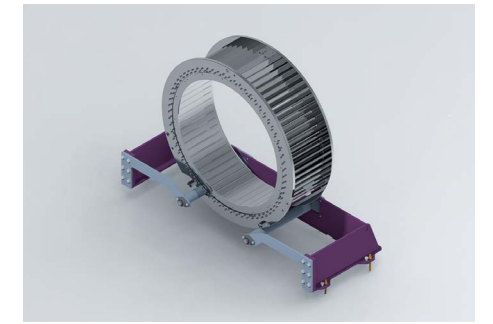
Ultra safe

The track-guided system guarantees safe and ergonomic movement of loads.



Ultra fast

Very short exchange times and minimization of down-times.



Ultra efficient

One exchange cart for two knife-rings.

Knife-ring
Flaker PZKR
(14, 15, 16)

Knife-ring
storage

Knife-ring
sharpening and setting
machine PZSE

Knife-ring
washing machine PZW

uTrackSTV

The AGV for ultra flexible and ultra efficient warehouse logistics

The new uTrackSTV raw panel distribution carts enables the efficient distribution of raw panels in area storage. With the Automated Guided Vehicles, several carts can carry out longitudinal and transverse transports in one aisle. This makes warehouse logistics much more flexible. Wireless operation enables variable aisle lengths and customizable warehouse layouts. The precise and reliable track guiding via the traversable RoundTrack system ensures high energy efficiency. The advantage: less carts, parallel processes and maximum productivity.



Technical data

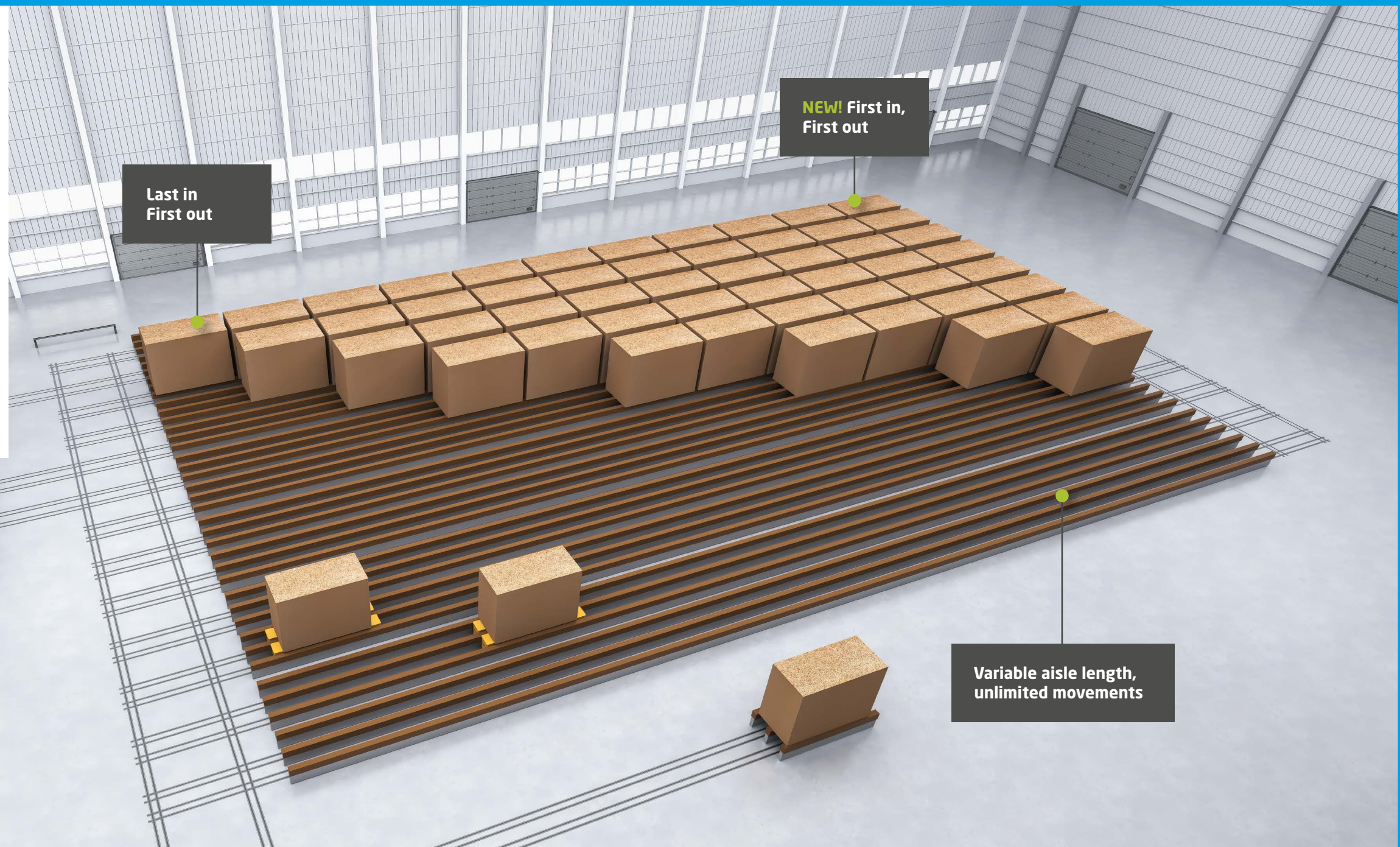
Max. load-bearing capacity per cart	<ul style="list-style-type: none">■ 60 t■ 80 t optional
Speed	<ul style="list-style-type: none">■ 60 m/min (unloaded)■ 30 m/min (loaded)
Acceleration	<ul style="list-style-type: none">■ 0,21 m/s² (unloaded)■ 0,5 m/s² (loaded)
Deceleration	<ul style="list-style-type: none">■ 0,25 m/s² (unloaded)■ 0,25 m/s² (loaded)
Lifting function (spindle)	<ul style="list-style-type: none">■ Lift range: 160 mm (including track change)



uTrackSTV

Achieving more with less vehicles

Less vehicles, more efficiency: the system only requires one AGV. Each vehicle enables longitudinal and transverse transportation as well as simultaneous parallel travel in the transverse aisles. Cable-free operation thanks to wireless communication and battery-powered vehicles enables maximum flexibility: variable aisle length and unlimited maneuverability.



uTrack flexible

Only one uTrack system required. Each vehicle enables longitudinal and transverse transport. This enables flexible storage strategies, including FIFO and LIFO.



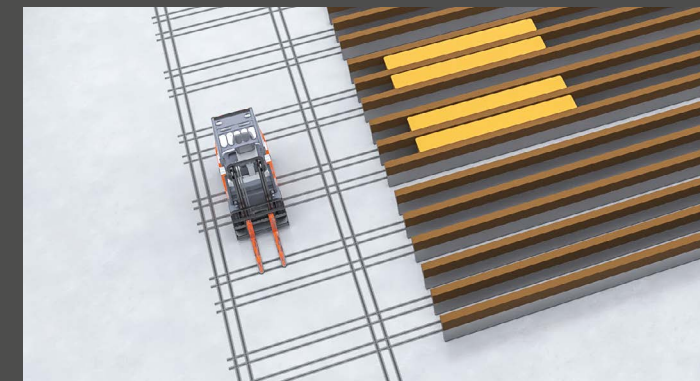
uTrack strong

uTrack is a heavy-duty AGV for stack weights of up to 60 tonnes (optional 80 to).



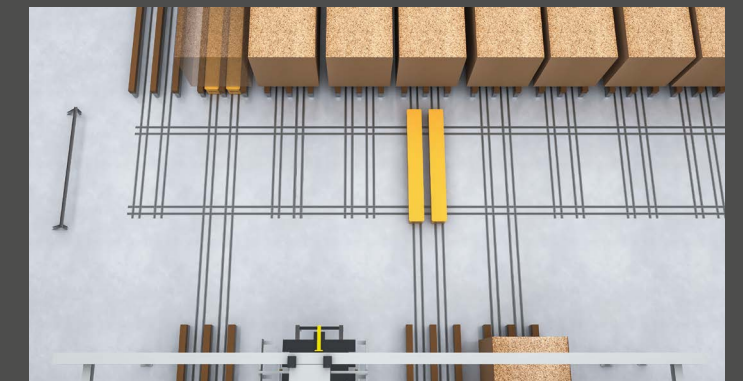
uTrack robust

The round rail system allows forklifts and pallet trucks to drive over it. No interruption of logistics processes due to emergency concept.



uTrack precise

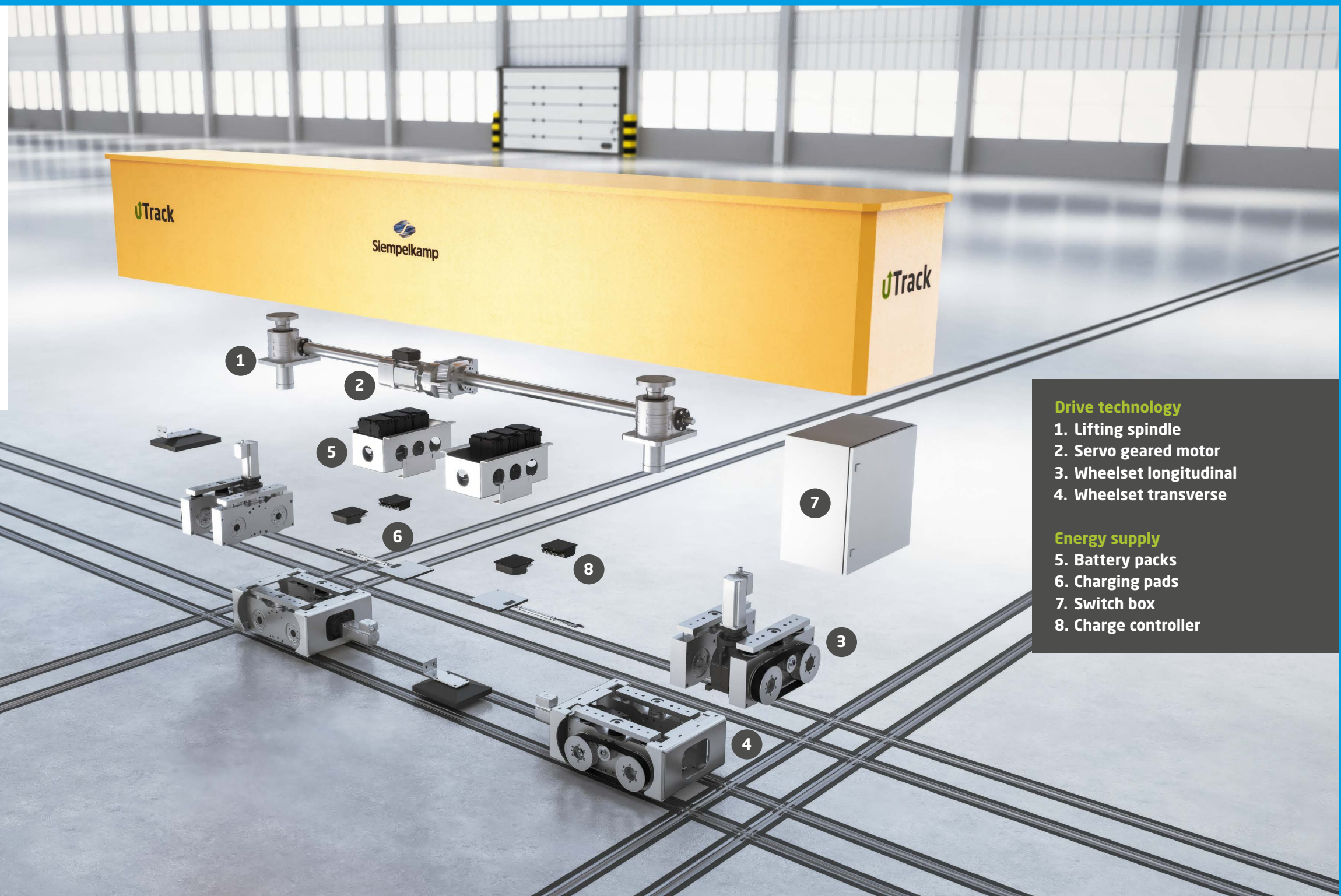
Safe and precise track guidance with RoundTrack technology. Cross travelling gears for flexible changes of direction.



uTrackSTV

Powerful drive and efficient energy supply

The lean design and the use of energy-efficient components make the uTrack system particularly economical and sustainable. The AGVs are powered by 48 V servo drive technology. The battery system with inductive charging system ensures a high charging capacity and maximum operating time.



Drive technology

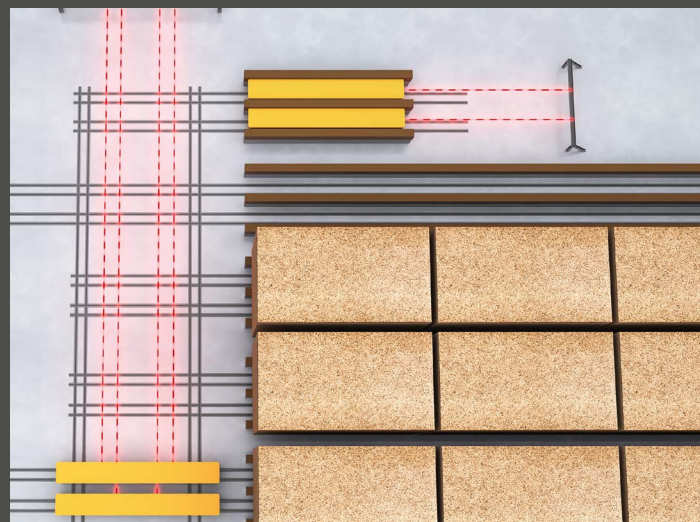
1. Lifting spindle
2. Servo geared motor
3. Wheelset longitudinal
4. Wheelset transverse

Energy supply

5. Battery packs
6. Charging pads
7. Switch box
8. Charge controller

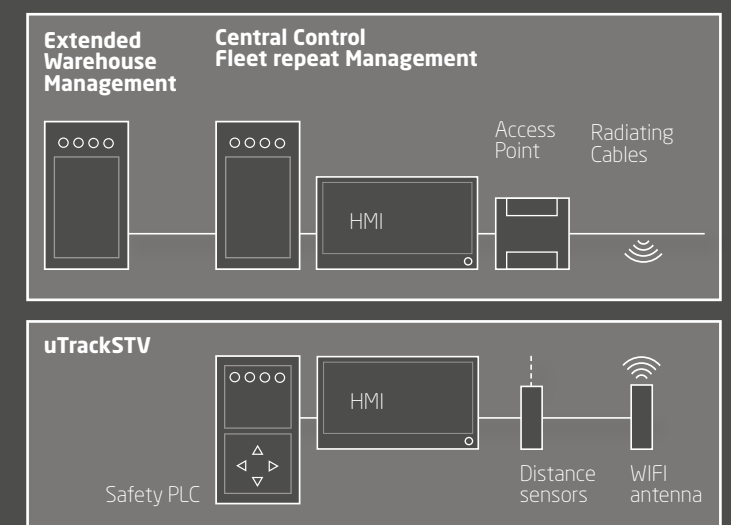
Navigation & Communication

Positioning via highprecision sensors. Secure ProfiSafe communication via WIFI for transmitting safety-relevant signals. WIFI-communication via leaky wave cables for interference-free transmission in the alleys



Vehicle and central control

Safety-capable PLC S7-1500F in every uTrack. Control panel on the control box with access to basic cart functions, diagnostics and so on. Connection option for a handheld control device.



uTrackBTV

Ultra precise positioning accuracy and exact interaction

uTrackBTV is the Automated Guided Vehicles for panel handling that is customized to the process. It replaces manual processes and the use of forklifts or cranes. The integrated direction change technology in particular increases flexibility in the transport process. It is used wherever large and heavy panels need to be transported, e.g. in panel finishing (short-cycle press line), warehouse management and general warehouse logistics. The advantage: increased productivity through automated material flows.



Technical data

Max. load-bearing capacity per cart	<ul style="list-style-type: none">■ RS25: 20 t, RS40: 40 t, RS60: 100 t
Min. dimensions (W x L x H)	<ul style="list-style-type: none">■ RS25/40: 1400 mm x 2500 mm x 300 mm■ RS60: 2500 mm x 3200 mm x 440 mm
Travelling profile	<ul style="list-style-type: none">■ Max. speed 30 m/min, max. acceleration 0.2 m/s²■ Min. braking distance (20 m/min) approx. 300 mm, standard positioning accuracy ±3 mm

50 %

faster handling.
Up to 50 % faster through material flow automation (raw/finished boards).

100 %

flexible chassis design.
Customized adaptations:
Chassis design and conveyor belts.

99,8 %

production reliability.
Nearly all uTrack components are maintenance-free.

±3 mm

positioning accuracy.
The drive-over track guidance enables high-precision positioning.



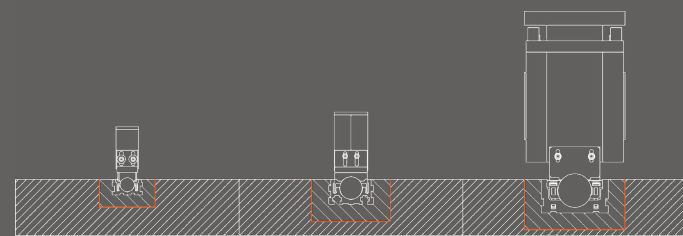
RoundTrack

Highly precise and reliable track guiding

The RoundTrack from Siempelkamp Transport Systems is the basis for the highly precise and reliable cart track guiding function. The wheels ensure minimal rolling resistance while reliably guiding the system. Even heavy objects weighing up to 5 t can be moved by hand.

RoundTracks for all load segments

RoundTracks with diameters of 25, 40, and 60 mm are available to accommodate different payloads per wheel. The RoundTrack RS60 has a nominal load-bearing capacity of 15 t per wheel. Even a carriage with four duo cassettes can move 120 t.



RS25
up to 40 t*
50 x 100 mm**

RS40
up to 80 t*
75 x 140 mm**

RS60
up to 200 t*
90 x 180 mm**

* max. payload capacity per cart
** Installation channel size, height x width in mm

RoundTrack installation in 4 steps.

Siempelkamp's cooperation partners around the world are available to install the RoundTrack. The track guiding system is integrated in the building floors in four steps. For further information, please refer to our installation conditions.

1.

Measuring
and marking
floor slots

2.

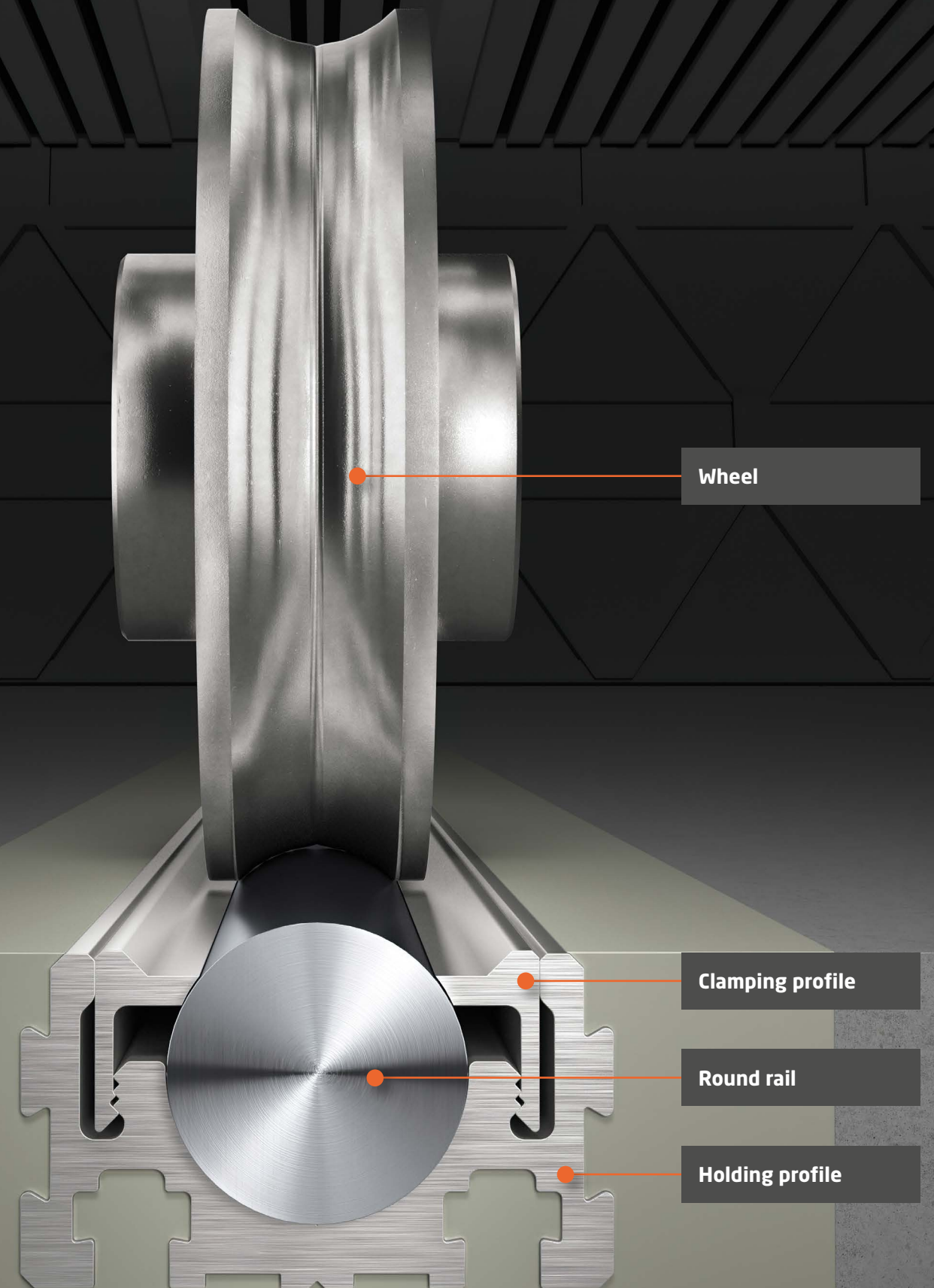
Cutting, chiseling
and cleaning
floor slots

3.

Positioning
and aligning
RoundTrack

4.

Grouting
RoundTrack
in the channel



Wheel

Clamping profile

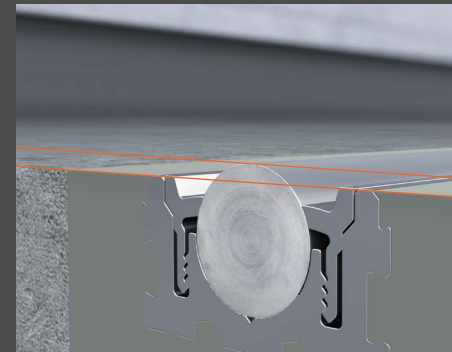
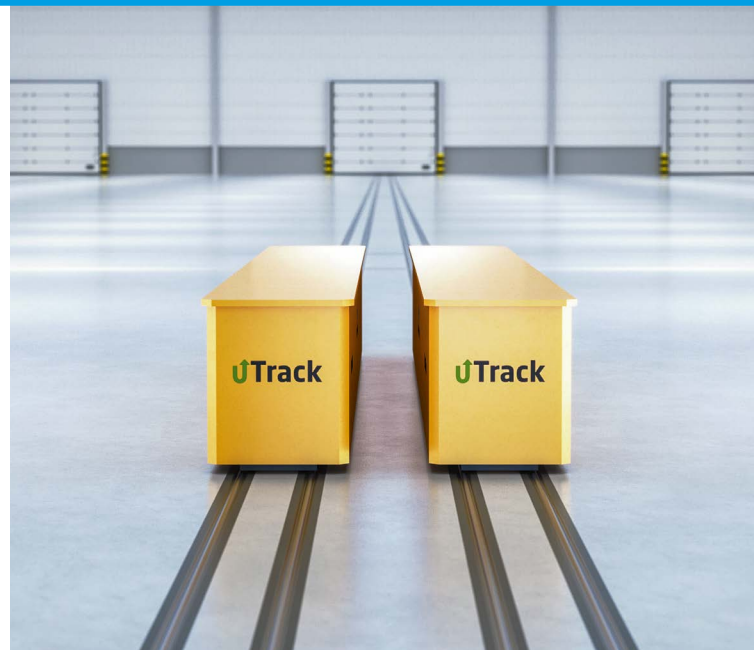
Round rail

Holding profile

RoundTrack

The transport system with ultra benefits

The RoundTrack sets standards for efficient product and material flow of loads weighing up to 200 t. It is capable of transporting heavy components or even entire machines and systems. This means the RoundTrack system offers all the advantages of modern line assembly.



Tracks are protruding only a few millimeters above of the floor: 3 mm above ground level with RS25.



Height tolerance ± 1 mm over a 5 m track, tolerance of the track gauge, ± 0.5 mm



High energy efficiency due to extremely low rolling resistance



The advantages at a glance:

Ultra strong

Reliable and safe transport of wood boards.

Ultra precise

High-precision positioning and fleet repeat accuracy.

Ultra efficient

Maintenance-free system with low operating costs.

Ultra compact

The flattest AGV system in its performance class.

Ultra available

Maximum production reliability, minimal downtimes.

Do you want to increase the productivity of your wood-based panel production?

Contact our AGV and RoundTrack experts:

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sales@strothmann.com
www.strothmann.com/wood

Further informations:
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