

Call us now to find out more about our cost - saving efficient flexible storage systems



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Gravity Roller Conveyors, Pushback - Trolley System and Carton Live Storage

Gravity Roller Conveyors

Roller tracks for palletized goods

Gravity roller conveyors used as a live storage system provide the most economical solution for LIFO and FIFO storage.

We advise, plan, produce and deliver the complete roller conveyor technology with the highest precision.

We also offer customized solutions for spe cial applications, e. g. pallet cages, metal and plastic pallets in various dimensions. *Adapted to YOUR racking system*.

- Hand truck unloading module
- Dynamic brake
- Brake rollers
- Entry guides
- Separator
- Rollers
- End stop
- Roller protector



Loading module

Full width, 2- or 3 track module, depending on the handling device

- Loading module with entry guides
- Rollers at lane entry protected by heavy duty steel angle
- Entry guide for centered positioning of pallets
- Roller protector made of hot rolled angled steel



To avoid damage in everyday use, entry guides and roller protectors are an extremely robust design





Intermediate module

The side profiles of the roller tracks consist of strong U- or L profiles. The smooth running rollers are made of blank steel (standard) or zinc plated (optional) material. There is one brake on each pallet position.

Brake roller 89mm

The core of the brake is a 3 stage planetary gear with progressive braking action and very low starting torque. A special feature is the leaf spring, ensuring permanent contact with the pallet. There is one brake roller per pallet position.

- Clamp hooks for fitting conveyors on box beams
- Brake roller for pallet weights up to 1,500 kg

Mechanical separator

- The reliable mechanical separator guarantees the separation of pallets, and the removal of the pallet without any line pressure.
- All parts are made of heavy steel which prevent damage during rough operation.
- The integrated roller in the separator ensures that the pallet always reaches the end stop.

Pneumatic separator

For extreme situations the pneumatic separator is the best alternative as there are no mechanical parts to be damaged. The separation is achieved with optical sensors instead of a mechanical pedal.

By adapting the software it is possible to separate a variety of pallet lengths and weights in the same lane. Euro half pallets can be offered in pairs or single.



Unloading module

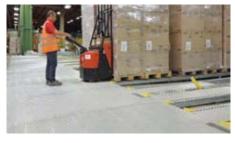
- Maintenance free and smooth running rollers
- Speed controlled arrival of pallets at end stop through the dynamic brake roller, even with varying pallet weights
- Simple and safe unloading of pallets
- Robust steel end stop
- Heavy Duty end stop
- Hand truck unloading module with buffer, side guide wheels and integrated sprinkler system





Crossway transport

- With ergonomic picking directly from pallets, products are easily accessible with a depth of 800mm instead of 1200mm
- The 3 track design eliminates roller deflection, increases the load bearing capacity and reduces malfunctions
- Short roller pitch T = 52mm
- Excellent running characteristics thanks to short roller lengths (outer roller 74mm, middle roller 150mm)
- Good access to the floor between and under the tracks for cleaning purposes
- Separator can be equipped with a foot release when needed. Empty pallets can be removed without any line pressure
- Back stops in the lateral tracks behind the first pallet
- Additional back stops when operated with automatic devices at the loading side
- Integration of intermediate separators to reduce the line pressure



Live storage for crates

To ensure that crates run smoothly through the lane, full width steel rollers offer the better solution in comparison to plastic wheel tracks

- Controlled arrival speed by using brakes or braking plates at the lane end
- Picking of single items or full crates
- Division of the lanes by using higher side profiles
- Possibility to use roller tracks and carton live tracks
- Pre assembled roller tracks with full width steel rollers in a standard pallet rack
- Heavy duty conveyors
- Load bearing capacity of each roller up to 160 kg (diam. 50mm, width 400mm, zinc plated)
- The new brake roller ensures a controlled running speed, even with different crate weight









Cost-effective, efficient, reliable upgrading and maintenance

Due to the conical shape of the trolleys, the runner supports remain in a horizon-tal position. The top trolley is loaded with the first pallet.

By pushing against the coloured contact plates the second pallet is inserted on the second trolley. This will be repeated until the lane is full.

The last pallet is placed on the rails.

Due to the gentle slope, the trolleys will run to the front of the racking during un-loading.

- Pallets of different quality can be used without functional problems
- Use of hot rolled angle (recommended)
- Use of box beams

A gradient of only 2.5 % is required for the smooth running of the trolley and this results in significantly less line pressure in the critical areas.

Pallet Support

The sophisticated, robust design of the trolley pushback supports 2 or 3 runners of the pallet and therefore smooth operation is not reliant on pallet quality.





Pushback Trolley System

The ideal solution for option crossway storage of pallets

- The gentle slope reduces the line pressure at the unloading side
- Reliable, regardless of pallet type and quality
- Existing racks can be upgraded with Pushback Trolley
- Also suitable for use in coldstore environments
- Interesting solution for upgrading drive in racks
- Every level can store different SKU s
- Eliminates time consuming driving into racking lanes, increased efficiency of pallet movements and prevents potential damage to racking structure

Features

- Pallet runner supports
- Top hat profile
- Pallet counter
- End stop
- Trolley
- Floor support





Optimal protection of goods during loading



As the trolleys have horizontal supports, the goods can be placed upright. The truck does not need a tiltable mast or forks. Thus permitting the protection of goods by pushing with pallet against plate.

The loading operation is done horizontally, without a tilted mast.

The goods are positioned upright in the rack; the forces pushing against the trolley will not damage the goods.

Normally damage can occur when loading goods onto tracks as the product on the pallet leans forward against the incoming pallet.





Modular system

- **Brake clip:** Used to slow down goods before reaching the end stop. Available in various lengths
- Full length divider: For separating adjacent lanes. Can be adjusted without tools
- Racking structure: Uprights, frames and beams are available in almost any dimension
- Live storage beds: Consist of front and back beam, two side profiles and, if needed, intermediate beams
- Brake roller 32mm: Developed especially for boxes and totes (2-50 kg). Can be retrofitted to existing systems. Precise controlled rolling characteristics. The containers run quietly and evenly slow until the stop. No trouble restarting the boxes.

Integration into existing systems

Upright adapters ensure integration in any pallet rack. The bed width can be adapted to the existing width between uprights.

Above the carton live frames, further levels for pallet storage can be provided.

The buffer storage increases the replenishment speed of the carton live system.

Loads up to 2,500 kg per bed

Depending on the loads imposed, the bedwork will be equipped with more intermediate beams or higher guage steel.

With this flexible design, single unit weights up to 40 kg and bed loads up to 2,500 kg can be implemented with standard beds of 2,700 x 2,500mm. Bed widths up to 3,000mm are available.

Assembly and adjustment

The live storage beds are easy to install. Should the product range change, the beds can easily be adapted to other box sizes.

Integration of conveyors

more.

For moving the picked items down the line a conveyor can be mounted in front of the live storage system. An interesting feature can be a pick to light system to increase the productivity even



Carton Live Storage

Standard order picking flow racks

- Simple and cost efficient installation
- Individual design and complete use of the rack front for order picking

Order picking flow racks with conveyor

- Full utilisation of the rack front for order picking
- Good productivity thanks to conveyor (for transporting the order picking containers)
- Minimized walking distances, no turning around
- Ergonomic order picking through individually designed order picking front

Integration of the flow beds and pallet gravity conveyors in existing racks with dynamic pallet buffer (pushback roller conveyors)

- Simultaneous order picking of individual packaged goods and complete units
- Short distances on the replenishment side, quicker feeding and optimal use of available height through pallet buffer
- High pallet availability by using pallet gravity conveyors

Order picking tunnel with gravity conveyors as buffer storage

- Safe work environment inside picking tunnel
- Optimal utilisation of floor space and height
- Short distances for replenishment by using pallet live storage as buffer

Increasing requirements for warehousing solutions

Combined with the increasing diversity and range of products, picking becomes more and more important.

Front beam with scanner rail: The front beam can be equipped with a scanning rail to attach labels or Pick-by-light modules

Drop out tray: The sloped picking shelf optimizes picking of goods

Upright adapter: For the integration of flow beds in any pallet rack. Adjustable in increments of 20mm or 25mm

Roller tracks: The rollers are made of high quality plastic running on steel axles. The tracks can be adjusted laterally in increments of 5.5 or 7.5mm





