



Pallet live storage

Solutions from FiFo to LiFo.

JUNGHEINRICH

Using the force of gravity.

The principle of pallet live storage (flow storage) is mainly applied in First In-First Out systems. In general, loads are deposited in the pallet lanes by reach trucks. With gravity rollers, the pallets move automatically from deposit to pick-up position. Pallet centring is ensured by load guides. During the transit, brake

rollers check the speed and keep it constant. Separators ensure that the first pallet is separated from the other pallets and bring it to a stop at the offload end. The separator is released only if the first pallet is completely removed from the channel.

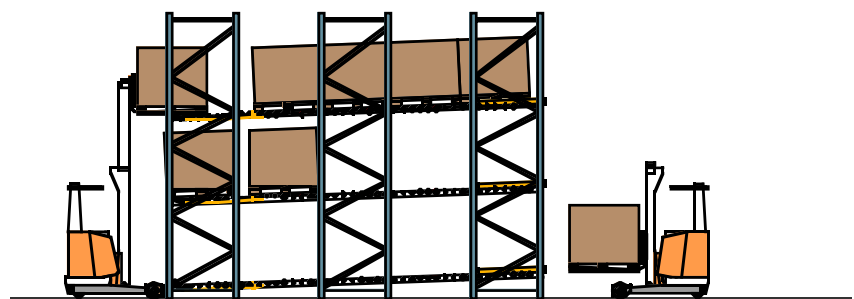




Small rollers play a big part.

Continuous racking with First In-First Out

- Sell by dates, batches and production series are closely monitored
- High space utilisation with dynamic block stacking
- Separation of loading and retrieval
- Internal transport distances are shortened



Pallet live storage



Racking uprights and racking beams of the Jungheinrich pallet racking type "B" and "E" are the basic components of pallet live storage. High precision and stability are ensured with tested welds and tight tolerances. The pallet live storage channels with roller conveyors are installed in this rigid frame construction. The static test of racking components is based on the European directive FEM 10.2.02. The racking conforms with the BGR 234 directives of the trade associations.



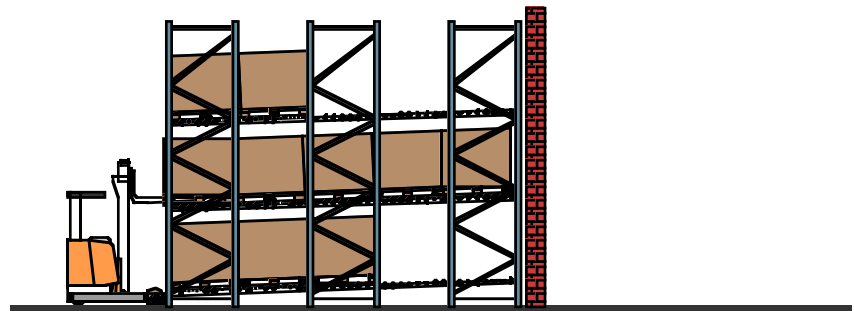
Type B



Type E



The push back racking is a variant of the pallet live storage that is utilised as Last In-First Out system. Here the loads are deposited and retrieved on one side of the racking only. Due to gravity roller conveyors, the remaining pallets move automatically forward to the deposit/pick-up position after the front pallet is removed. A centring aid is not required.



Push back racking

**Push back storage
with Last In-First Out system**

- Optimum space utilisation with dynamic block storage
- Unmixed storage



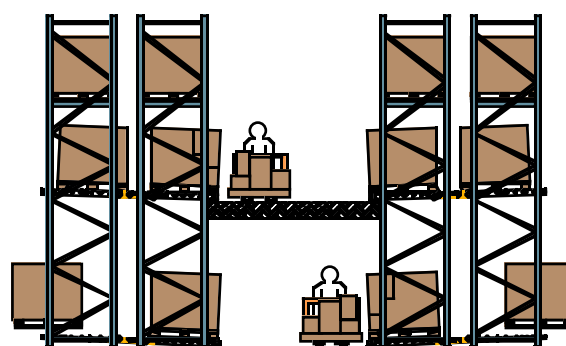
Typically Jungheinrich:
 Complete solutions
 from one supplier.
 Rack servicing cranes,
 racking systems and
 conveyor technology
 with control and ware-
 house administration
 systems.

**Pallet live storage with
 order picking platform and tunnel**

- Direct access to all articles
- Separation of supply and order picking zones
- 100 % availability of goods through storage position administration
- Maximum utilisation of storage volume
- Throughput increase through shorter order picking distances and times



Pallet live storage with order picking tunnel



Pallet live storage with order picking platform and tunnel



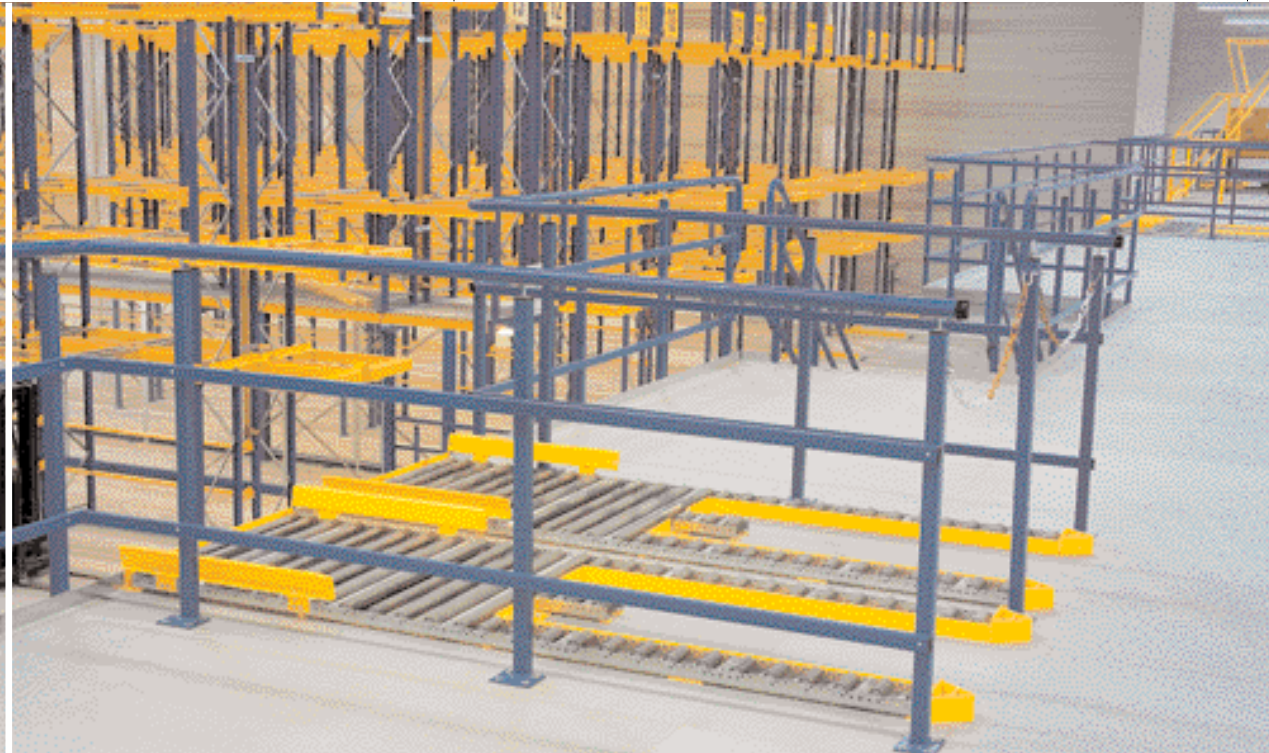
This is how your storage efficiency starts rolling:

Pallet roller conveyors are made of maintenance-free standard components and safety systems. They are designed appropriately, dependent on the pallet type and weight. According to the BGR 234 directive and dependent on the channel depth, the roller conveyor components are equipped with the following safety systems:

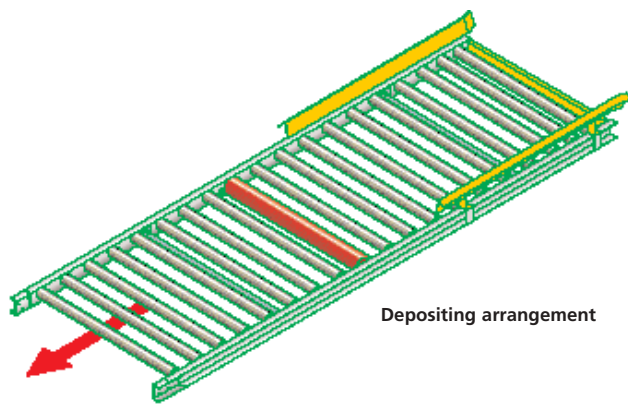
Roller protection, entry guides, brake rollers, separators, dynamic end stop. The length of the roller conveyor is the number of pallets x length of pallets + 400 mm. The roller conveyor slope varies between 3.5 and 4.5% dependent on the pallet structure. The roller bed profiles are designed as U profile or as angle profile.



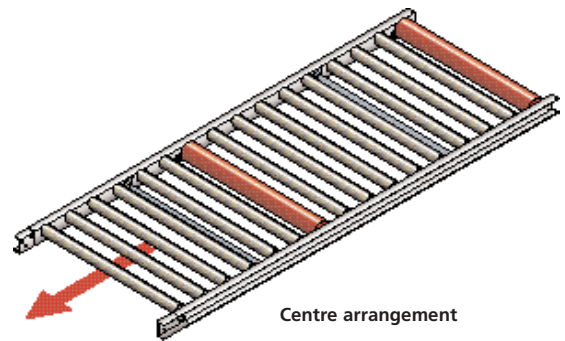
Three piece lead in section with entry guide



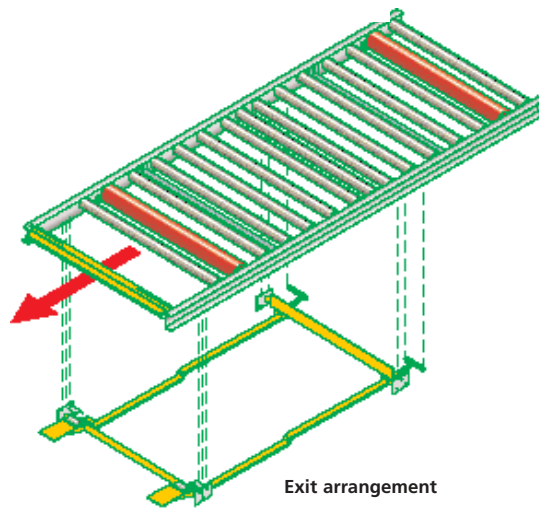
Pallet transfer position from storage platform to high rack installation



Depositing arrangement



Centre arrangement



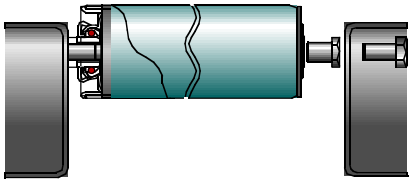
Exit arrangement

**Pallet transfer positions
to high rack installation**



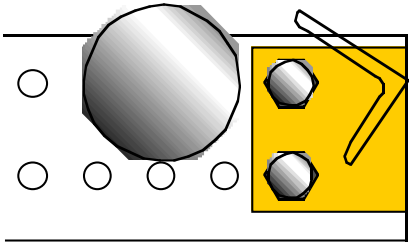
Support roller

All support rollers (standard design steel finish, special design galvanised) consist of tubular steel and ball-bearing steel plates.



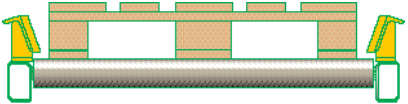
Roller protection

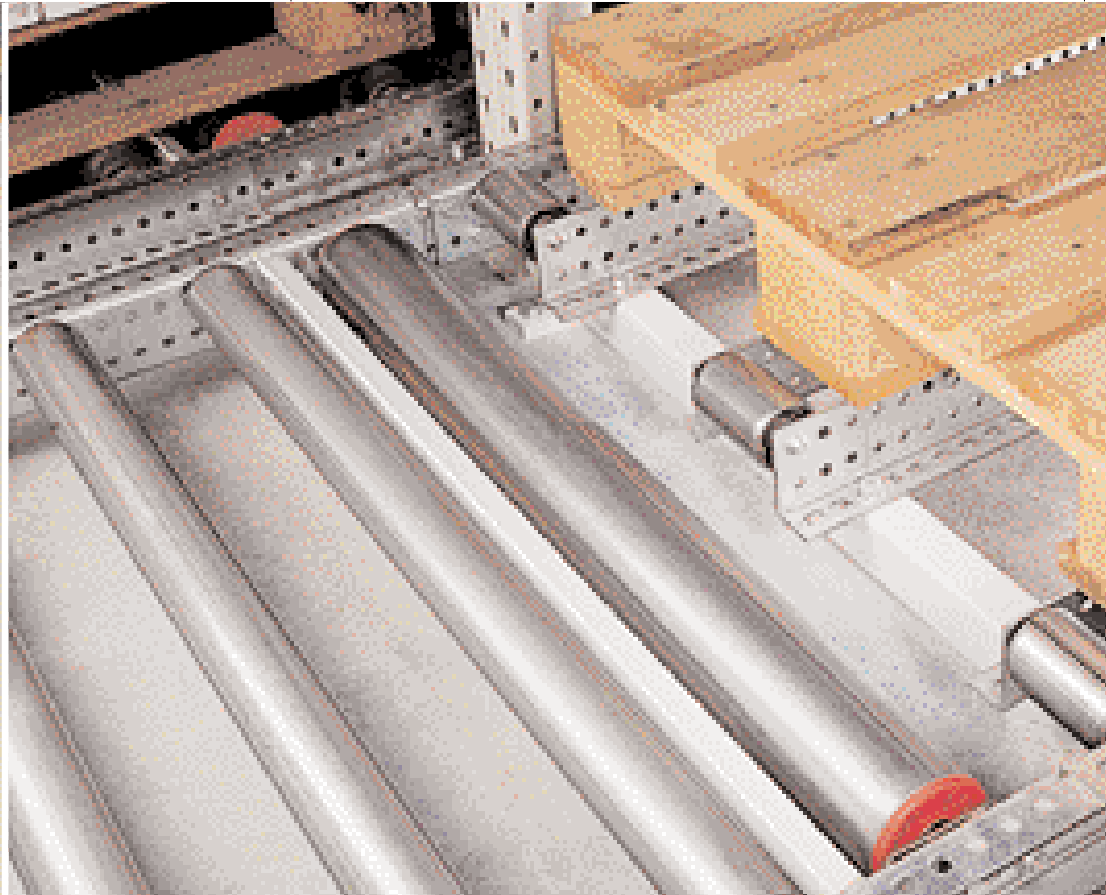
A strong angle profile is fixed to the feeding side for protection against damage by fork lift trucks. The roller protection is omitted in automatic operation.



Entry guides

The entry guides facilitate the centring of the pallet.





Brake anchor roller

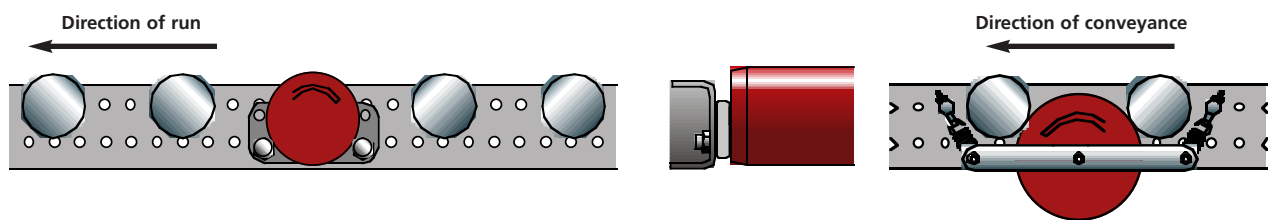
Brake anchor rollers

Direct braking is carried out via spring bearing brake anchor rollers with 3-stage planetary gear and progressive braking effect. Very easy start while at the same time high load capability is ensured with precision ball bearing.

The brake carrying rollers are installed above roller level and at the slightest pressure are pressed down on the remaining roller level and thus secure permanent contact with the load carrier.

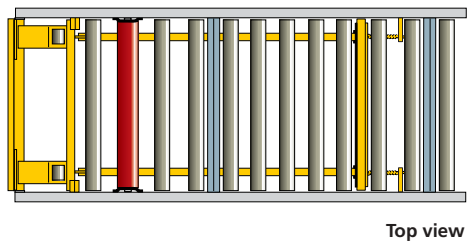
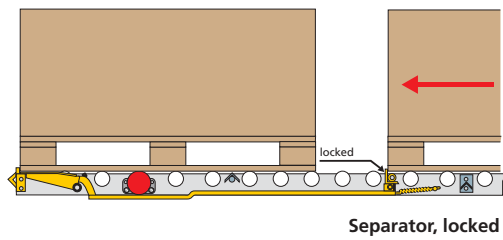
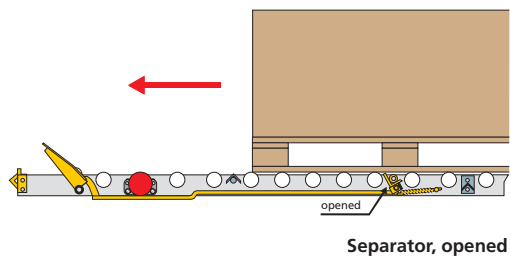
Brake roller

It might be necessary in special cases to use a directly effective brake roller instead of the brake anchor roller. This works via friction on the support roller.



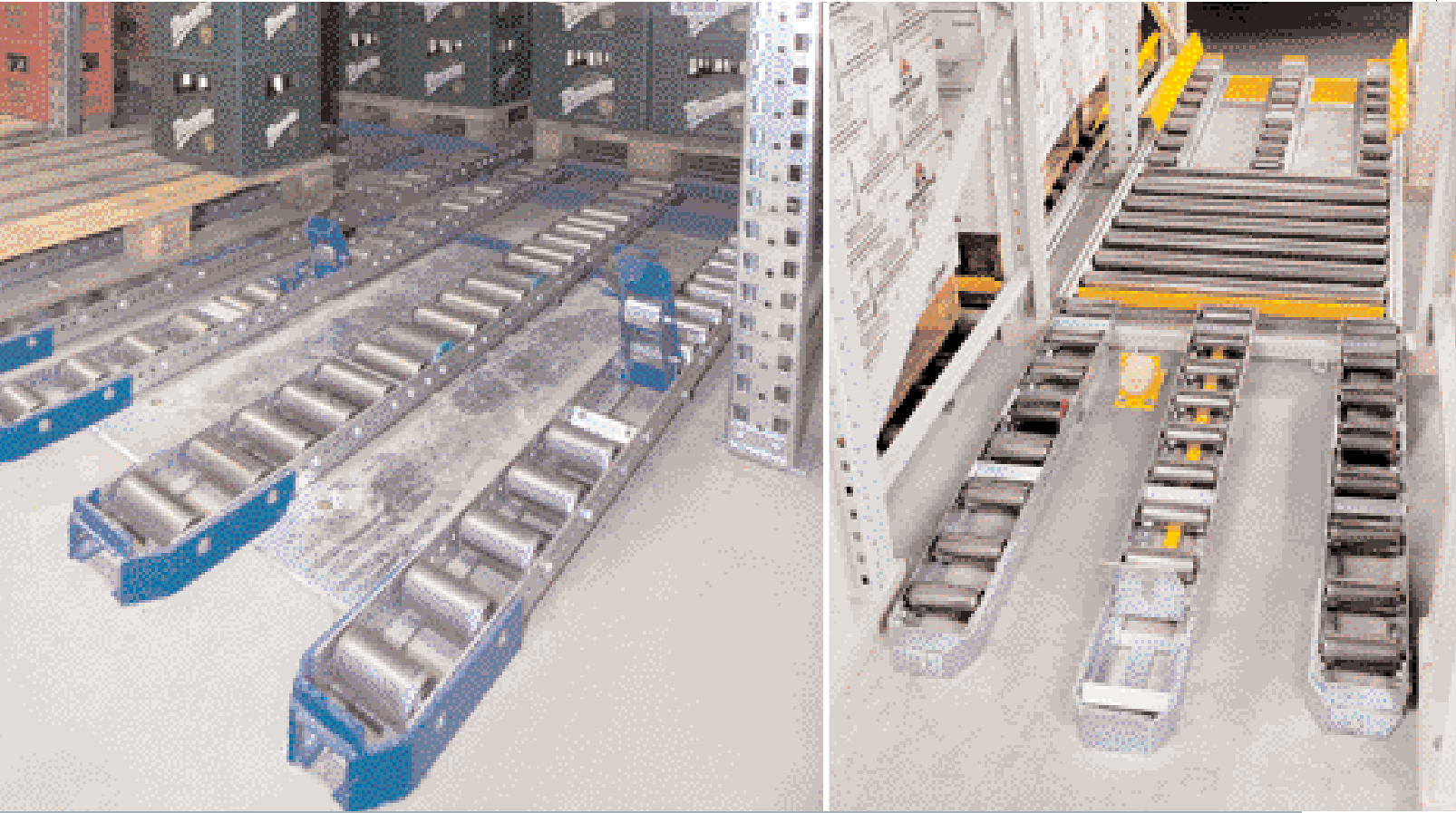


Separator and empty pallet magazine



Separators

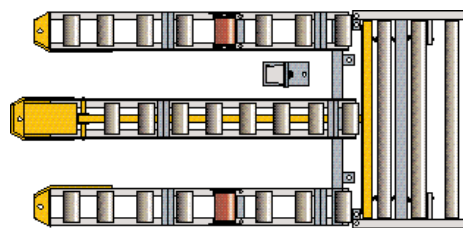
The mechanical separator with dynamic end stop installed in the retrieval area of the roller bed ensures pressure-free pallet retrieval. Dynamic braking is effected by a brake anchor roller that gently brakes the pallets and positions them at a precisely defined pick-up position.



Three-piece floor coasting

Floor coasting

The floor coasting with its three-piece construction and a run-out height of 66 mm (roller top edge) ensures gentle pallet removal. The three-piece floor coasting can also be equipped with dynamic braking by fitting short brake anchor rollers. Collision protection and collision buffers reliably protect against damage.



Three-piece floor coasting



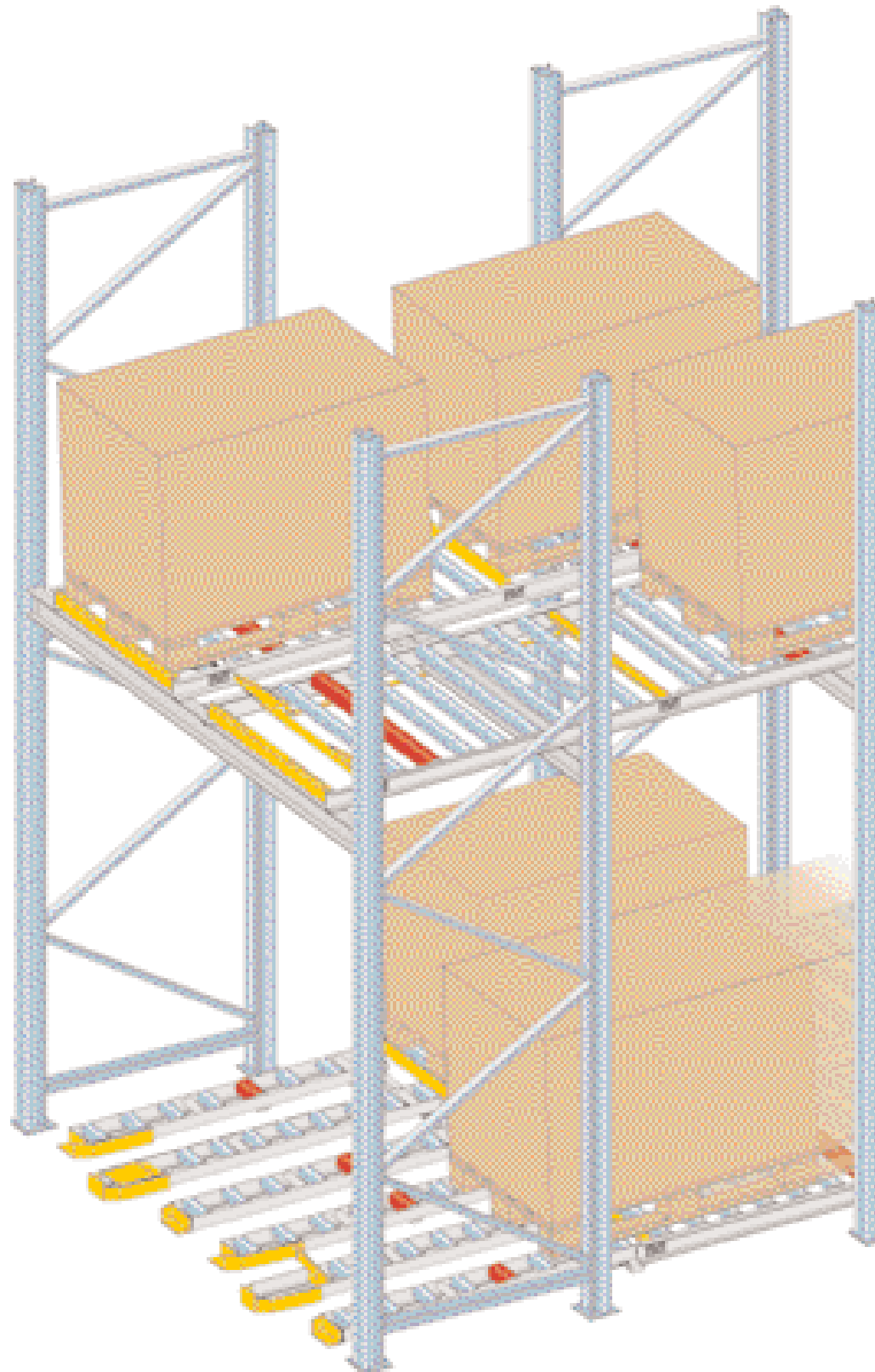
Outer guide

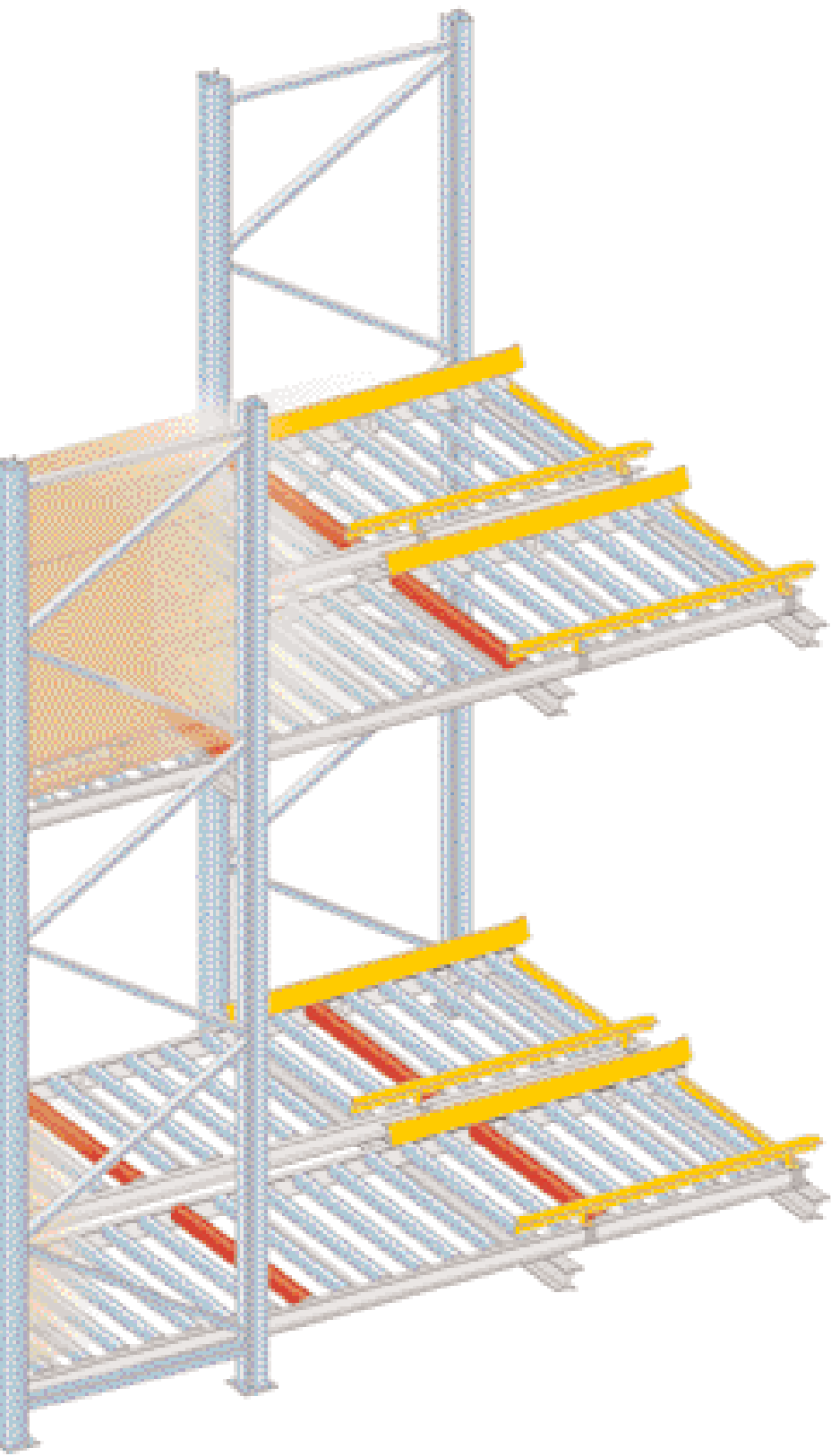


Centre guide

We set the ball rolling.

Cost effective and reliable.





Images used are for illustrative purposes only.



ISO 9001, ISO 14001
Certification of Quality and
Environment Management



Jungheinrich trucks conform to the
European Safety Requirements.

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