Drive-in racking

Drive-in racking allows to store several pallets in depth. Similar to block storage, this possibility provides an optimum utilisation of floor space and storage volume. However, loading and retrieval should be subject to a certain storage cycle.

This type of storage is chosen for pressure sensitive goods or unstable storage units which are stored in big quantities. The range of items stored in drive-in racking is small to medium-sized and has a low picking frequency. This storage solution is ideal for a small pallet turnover and favours an employment as seasonal store.

BITO

www.bito.com

Product information

Frequent application
- buffer store, seasonal store

Service options
- front stacker with a mast width of 950 mm maximum

Storage options
- pallets handled long side facing
- several pallets in depth

Surface/volume utilisation
- high volume utilisation
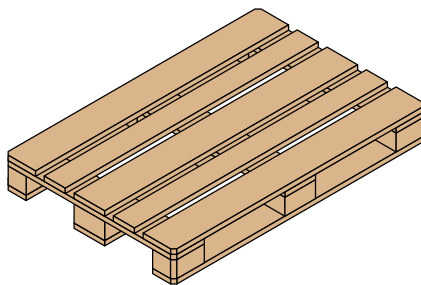- medium gain in floor space

Storage units

Palletised goods

Stock rotation frequency
- huge storage quantities per reference line
- small to medium sized range of products
- low turnover frequency

Stock characteristics
- sensitive goods
- unstable storage units

Information material

For more information on this product, please contact us on

Tel.: +49 (0) 67 53 / 1 22-1 64

or ask for our DVD
"Dynamic storage"

Our **PRODUCT CATALOGUE** provides detailed information on our entire delivery programme.

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Economic evaluation

In comparison to conventional pallet racking, drive-in pallet racking allows very cost-efficient and compact storage. The floor space gained can be used for increasing storage capacity or for a different purpose.

It is recommeded to dedicate a racking level to a specific reference line, as there is no permanent access to all pallets in store.
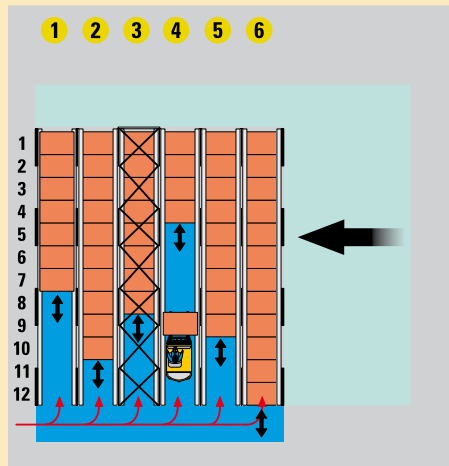
- **very economic pallet storage**

- **savings on expensive storage surface**
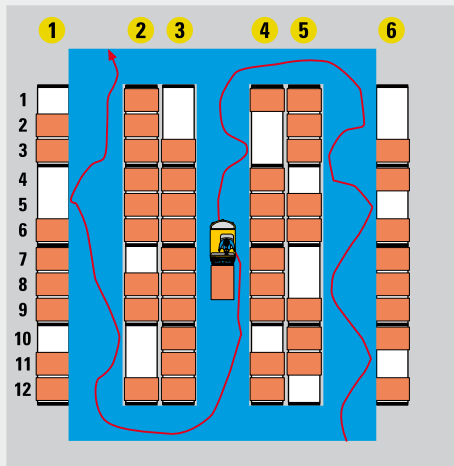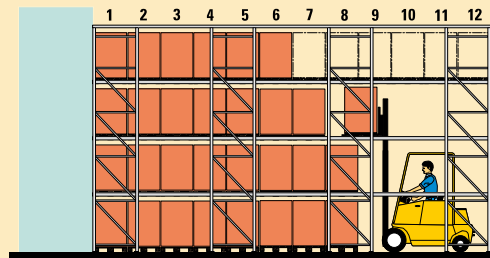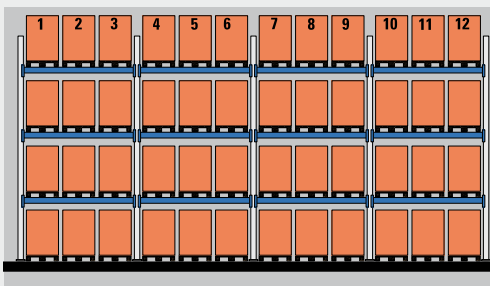

Conventional pallet racking	**Drive-in pallet racking**	**Comparison**

Our example is based on a pallet racking installation with 6 racking runs, each providing 12 pallet positions per storage level. There are 4 storage levels in total, including the floor level.

The layout plan alone already shows that the gain in storage surface is considerable.

Apart from the fact that drive-in pallet storage requires less storage surface, the upright projection demonstrates a further gain in storage volume.

Advantages of the system

General advantages of drive-in racking

- compact storage

- no pressure damage

- safe storage of pallets with unstable loads

- high volume utilisation due to compact storage

Specific advantages of BITO drive-in racking

- frames are the same as those used for the well established BITO pallet racking system

- brackets for the robust angled pallet seats can be adjusted in 75 mm increments

- hook-in mounting of brackets allows fast and easy assembly without bolts (suited for pallets without overhanging loads)

- pallets are safely guided by the sloping sides of the angled seats

- diagonal bracing provides for high racking rigidity

- all parts have a high quality galvanised surface

1.050 mm

max. 950 mm

1.200 mm

1.050 mm

1.350 mm
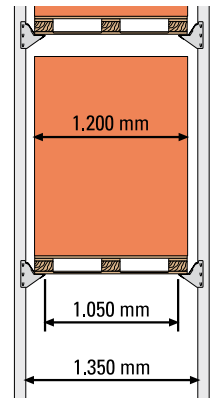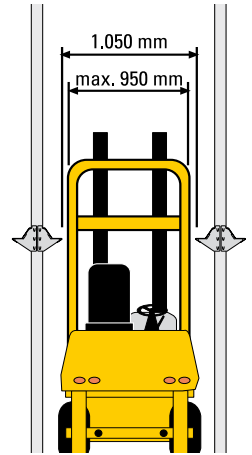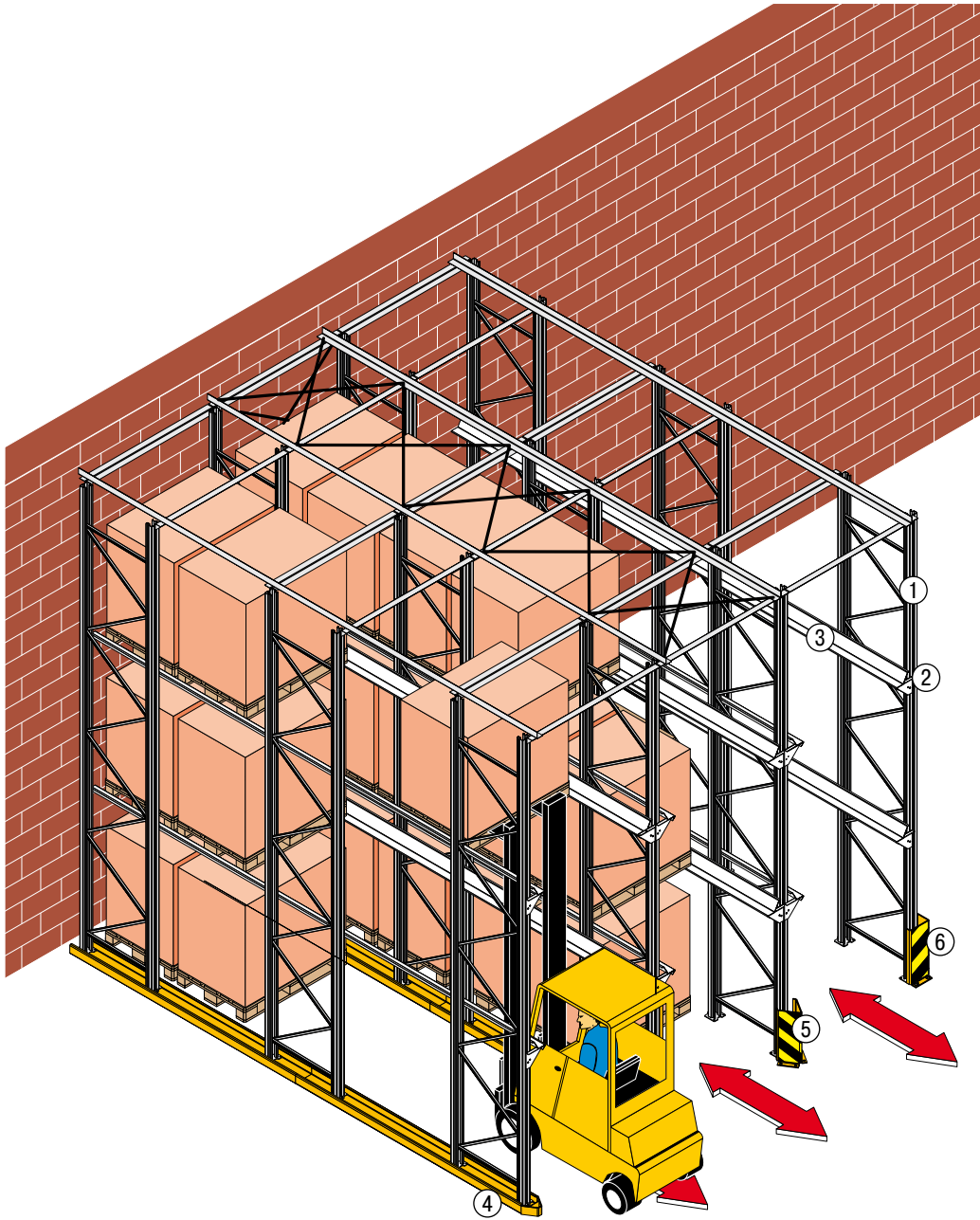
Pallet without overhanging loads
– hook-in bracket

max. 1.400 mm

1.050 mm

1.550 mm
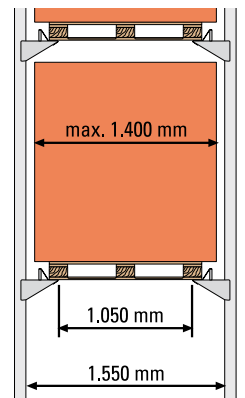
Pallet with overhanging loads
– hook-in bracket

1 Frame

2 Bracket

3 Angled pallet seat

**4 Vehicle guide rail /
load spreader with entry guide**

5 Column guard type EF

**6 Corner column guard
type AS 40.2**

Loading and retrieval of drive-in racking is done with a front stacker with a maximum mast width of 950 mm to allow entrance of the service vehicle into the lanes.

① Frame

The frame is an all-bolted component of our well established pallet racking system and is particularly suited for high load capacities. At their top, the frames are connected to each other with struts – in lengthwise direction as well as front to back. Additionally, the uprights of a frame are linked to each other by horizontal and diagonal struts to ensure that all parts of the frame are solidly connected and that the installation benefits from a high rigidity.
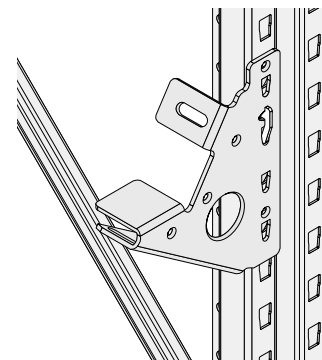
- **robust component**
- **high load capacity**
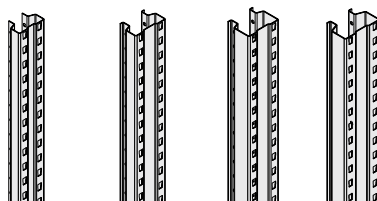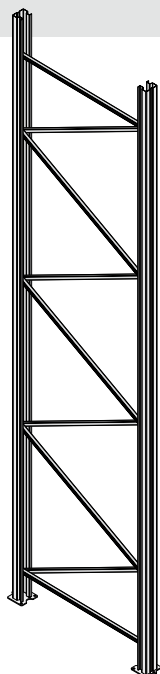
② Hook-in bracket

The 4 hooks of the bracket perfectly slot into the upright perforations. Unintentional lifting is prevented by a safety pin which is secured against dropping out by a 90° turn.

- **fast adjustment without bolts**
- **height adjustable on a 75 mm pitch**
- **high load capacity**

For pallets with overhanging loads, a larger hook-in bracket is used which is additionally secured by a bolt in the uppermost slot.
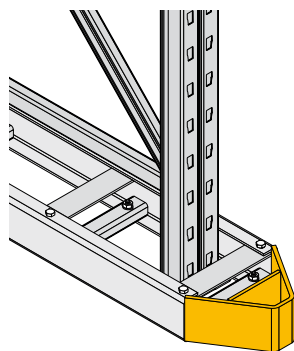
- **for pallets with overhanging loads**
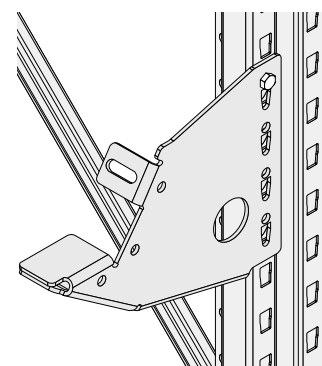
④ Load spreader with fork entry guide

Optionally, the drive-in lanes can be equipped with vehicle guide rails to keep service vehicles in track. In the case of poor flooring quality, this component spreads load pressure over a wider area.
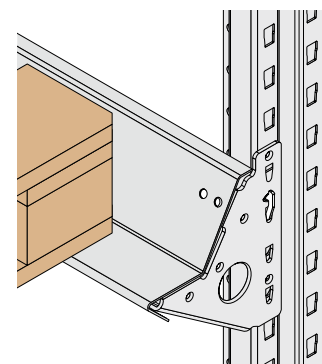
- **load spreader**
- **rail-guidance for vehicles**
- **entry guide**

③ Angled pallet seat

Bolted to the bracket. The broad seat surface and the sloping sides ensure safe pallet positioning.

- **safe pallet positioning**
- **strong component**

⑤ Column guard type EF

Protects uprights located between the outer frames at the right/left hand corner against collision damage from service vehicles. This 400 mm high, robust component is epoxy-coated in RAL 1003 and has additional yellow/black signal striping.

- **protection of uprights**
- **height 400 mm**
- **yellow/black signal striping shows need for increased attention**
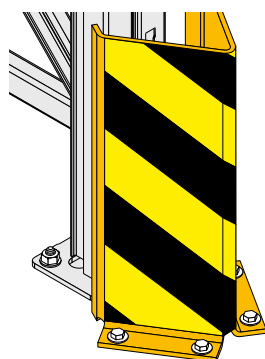
⑥ Column guard type AS 40.2

Safety regulations stipulate that frame uprights in corner areas must be protected against collision damage. The column guard AS 40.2 is 400 mm high – thus exceeding the required minimum height by 100 mm.
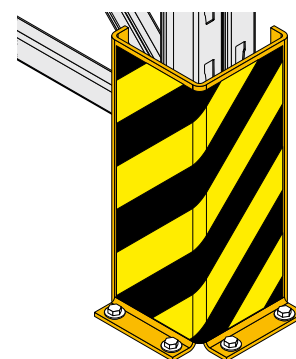
Service provider / Forwarder

Features

- **drive-in racking as supply and buffer store for big bags on Euro pallets**
- **pallet heights between 1.250 and 1.650 mm**
- **maximum pallet weight 750 kg**
- **12 pallet positions per level, 11 pallet positions per lane**
- **396 pallet positions per block**

Function

The forwarder uses this drive-in pallet racking facility as a supply and buffer store for bagged products such as artificial sweetener. Before, the bags had been stored on the warehouse floor. As the service provider ran out of floor space and as the construction of a new hall was no option, a drive-in racking was identified as the ideal solution to make better use of the available floor space.

The new facility accommodates a limited range of products supplied in easily deformable, unstable units for intermediate storage. Before delivery to the customer, large batches of palletised products are grouped together according to their despatch route.

In-feeding and out-feeding are very convenient: it is just as easy to load the big bags from a freight vehicle into the lanes as to feed the bags back into a freight vehicle. The facility is serviced with front stackers.

Benefits

- good utilisation of warehouse space
- hall is now subdivided into clearly structured storage areas
- lanes can be dedicated to a specific stock line
- risk of product damage is much lower than with floor level block storage
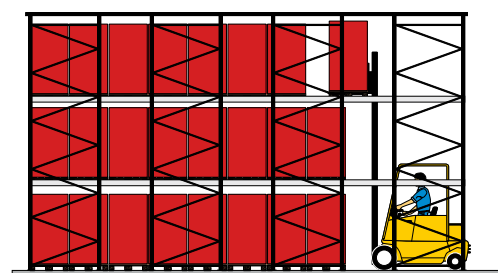
**KRAGE & GERLOFF
Logistik GmbH
Freight forwarder**

Features

- drive-in racking used as supply and buffer store
- three storage levels
- no aisles required between lanes
- computer-assisted goods-in and goods-out monitoring
- no pressure damage
- maximum storage capacity in a very limited space
- reduced floor space occupation

Function

The owner-managed service provider Krage & Gerloff Logistik GmbH has specialised in storage and transport logistics. At their location in Schwanenbeck, all kinds of manufactured products are stocked in drive-in pallet racking. In comparison to classic pallet storage, a drive-in racking facility provides an even inceased storage capacity at a very attractive price. In addition to this, reduced floor space occupation cuts down on operational costs. Apart from the fact that this solution allows maximum utilisation of the warehouse volume, it also allows safe storage of pressure sensitive goods. All goods are loaded and retrieved with front stackers.
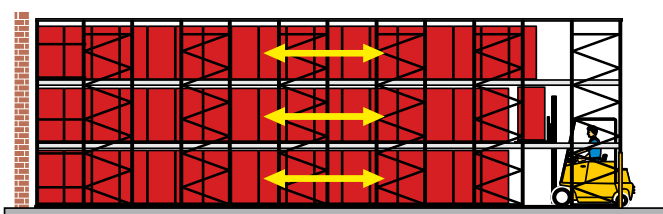
Benefits

- maximum utilisation of headroom
- space utilisation is substantially improved
- clearly defined storage areas allow to immediately locate any stock line
- no damage to products
- very compact storage