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SOME
SPACE
IN YOUR
LIFE



Catalog



Drive in Racking



DRIVE IN RACKING



DRIVE IN RACKING

Drive-in racking is designed for the storage of homogenous products. It accommodates a large number of pallets for each SKU. This system makes better use of the available surface and height space than any other.

Each loading lane has support rails on both sides. These are arranged on different levels and the pallets are placed on top. This racking system is made of extremely robust material, thus making it suitable for storing fully-loaded pallets.



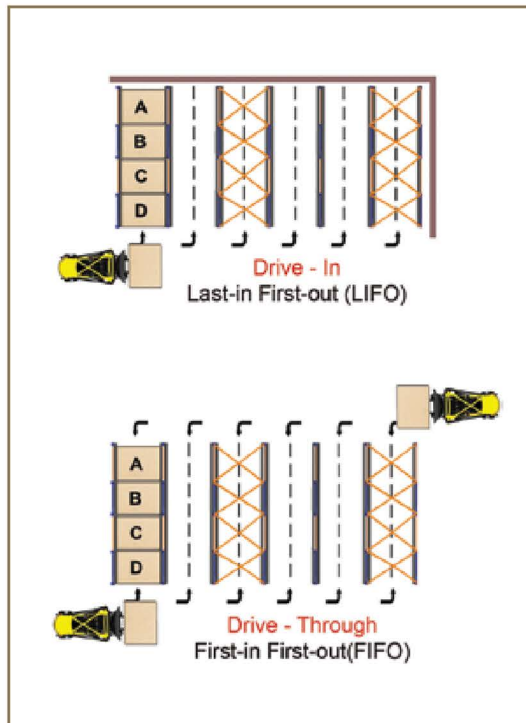
Comparing between Drive-in & Drive-Through

Drive – in Racking

This is the most common way of managing loads in a drive – in system. The racking units work like a warehouse depot.

There is just one access aisle, from which loading and unloading are carried out in reverse order. (LIFO). Drive-through In this case, the load is managed using the racking unit as a controlling warehouse, with two load access points, one on each side of the unit.

With this it is possible to control production differences, for example between manufacture and dis-patch, between production phase 1 and 2, or between production and loading bays. (FIFO)..



LOADING ORDER
A,B,C,D

UNLOADING ORDER
D,C,B,A

LIFO (Last In First-Out) System – the first load in is the last one out.

LOADING ORDER
A,B,C,D

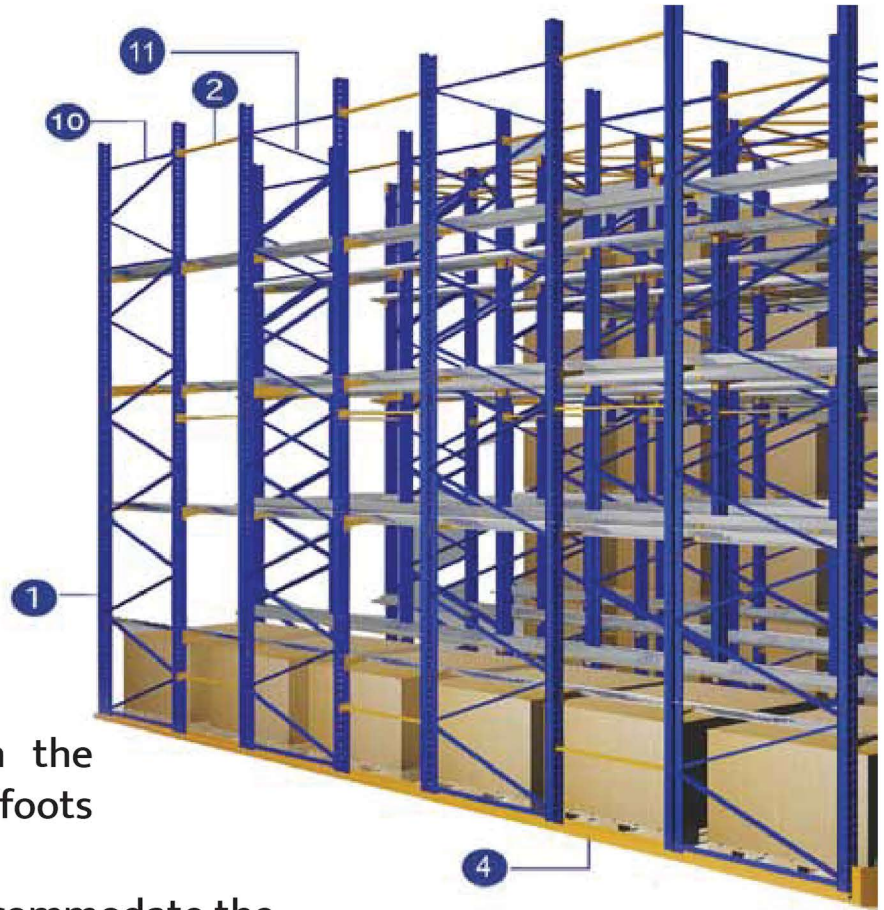
UNLOADING ORDER
D,C,B,A

FIFO (First In First-Out) System – the first load in is the last one out.



The basic elements of a driving system

1. Frame
2. Drive-in beam
3. Bracket
4. GP-4 rail
5. C-rail
6. Upper cross bracing
7. Back cross bracing
8. Guide rail protector
9. Guide rail
10. Leveling plates
11. Anchor bolts



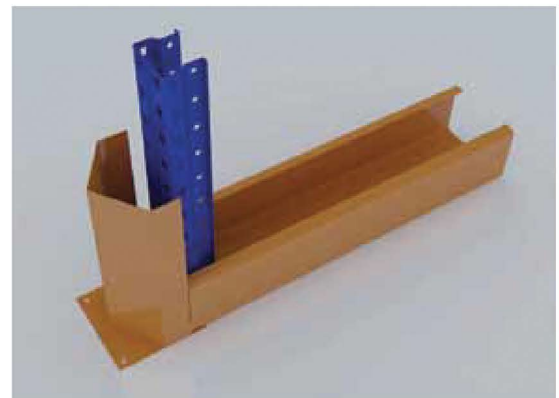
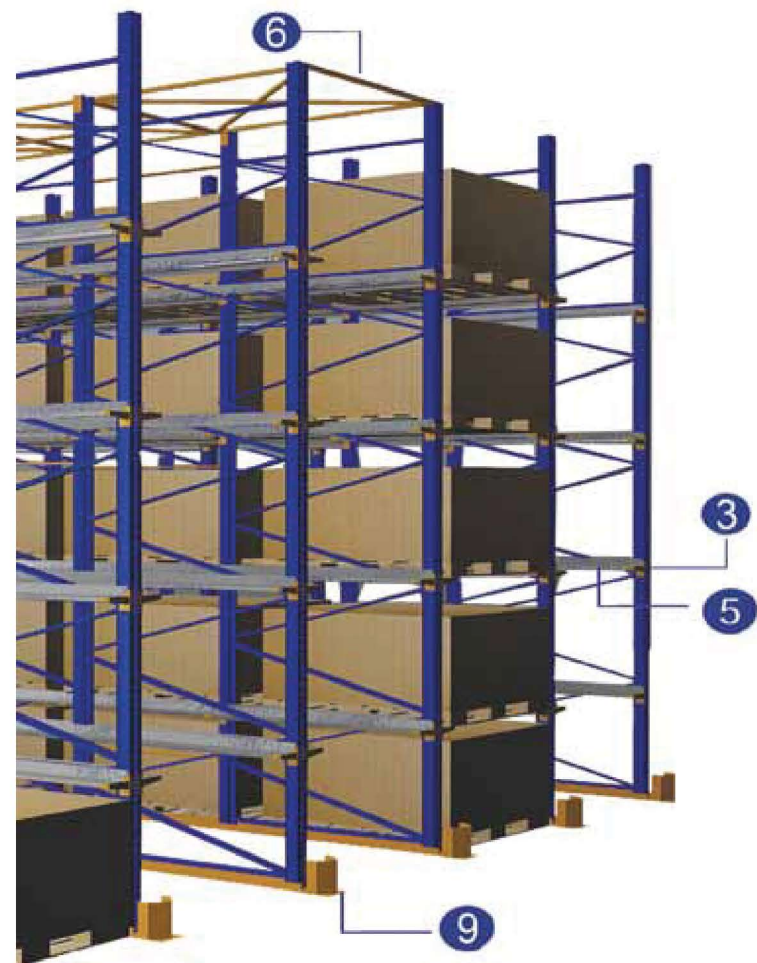
Frame

These are made up of two uprights with the corresponding Horizontals and diagonals feet plates and accessories.

The frames have slots every 50 mm to accommodate the beam and support. The depth of the frame is determined by the dimensions of the storage aisle and height measurements and weights of the pallets.



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Guide rails and protectors

This make it easier for the forklift trucks to Gain access around and reduce possibility Of accidental damage..

GP-4 Rail

This is a pallet support profile. Made of triangular-shape galvanized steel. It enables pallets centralization with minimal Loss of space (50mm) . the profiles are supported On and joined to the uprights using GP-4 brackets.

Cross bracing set

Depending on the layout. 2 adjustments aisle are Cross brace to guarantee stability. The upper horizontal aisles Must coincide with the back vertical aisles . As this transmited forces to the ground . The number of the cross braced aisles will be depend on the forces produced. This depend on the weight of the load , the heightof the installation, The number of levels and the depth of the lane.



DRIVE IN RACKING



Brackets

Bracket connectors feature a safety snaplock which automatically locks to the arm of the column , preventing accidental dislodgement during loading and unloading.

Upright Front Protection

These are installed at the front of the first upright of each row of frames and provide protection against possible minor impacts. Upright Style L Style.

Optional Components

Pallet Rail lead in Rail lead are installed at the end of pallet rails in each of the leading aisles of drive-in racking system. They help to guide the pallet at the entrance to each aisle.

Tops & Spine Bracing

IRack® I Full Tops Bracing and Full Spine Bracing solution is a special design which considering safety factors carefully, it's been tested in some pretty seismic countries and proved as a safe and reliable system

Flooring guide rails

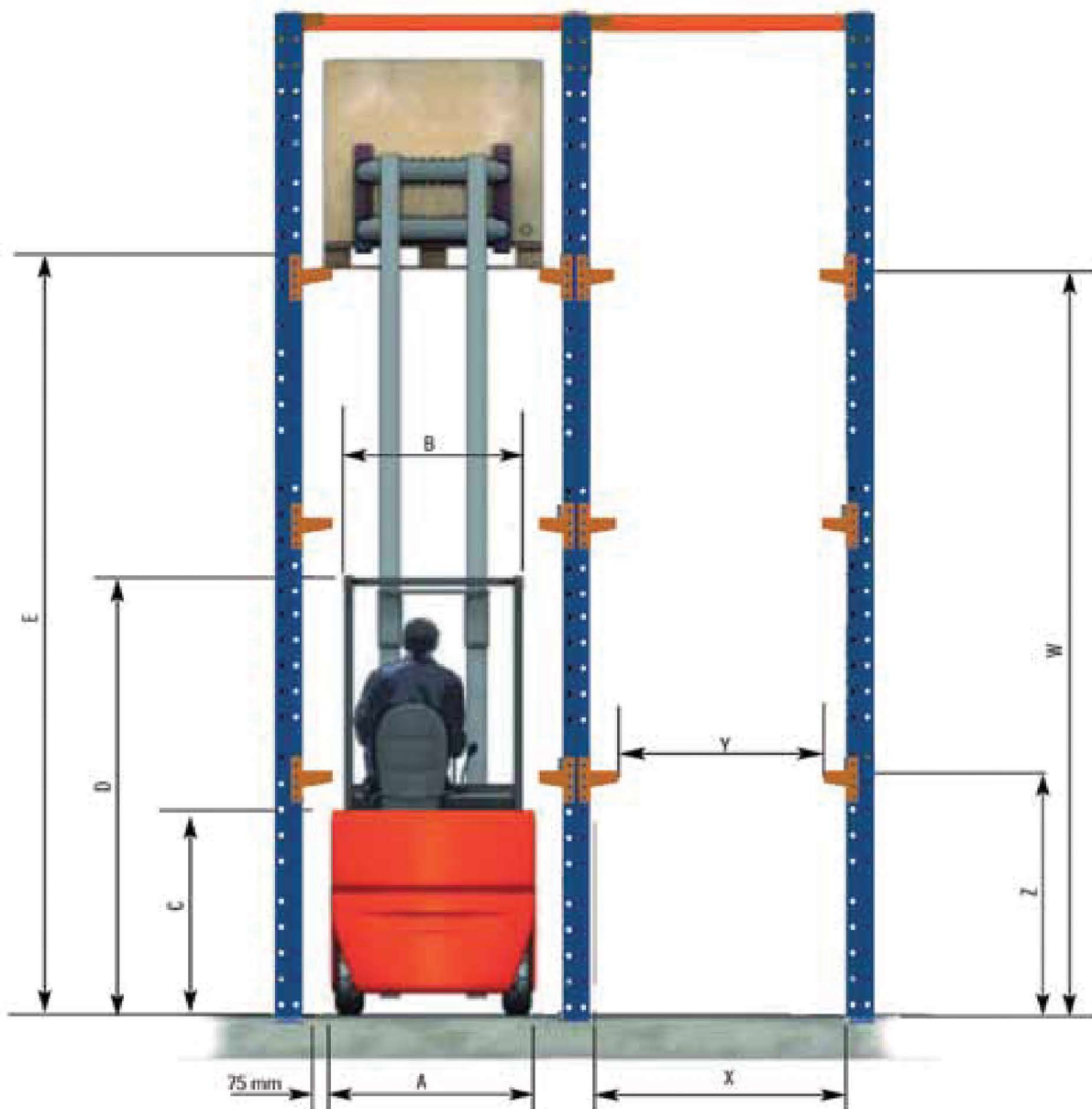
- Prevent the pallets colliding with the sides of the racking structure.
- Enable the forklift trucks to be equipped with side wheels so that they are centralized when moving inside the storage aisles.
- Levelling the tracking system.
- Uniform loading.



DRIVE IN RACKING

1- The forklift trucks travel along the insides of the storage aisles, so the necessary margins must be calculated in order to work safely. Certain measurements must be considered when designing an installation:

- A. Total width of the forklift truck. There must be a minimum tolerance between the forklift truck and the vertical elements of the racking units of 75 mm on each side. Dimension X, the distance between the uprights, must include this.
- B. Operator's protection structure. A minimum tolerance of 55 mm to the support rails is needed (dimension Y.)
- C. and D. Height of the base and protection of the forklift truck. Dimension Z and dimension Y must be cleared comfortably.
- E. Maximum elevation height. Must be at least 200 mm greater than dimension W.

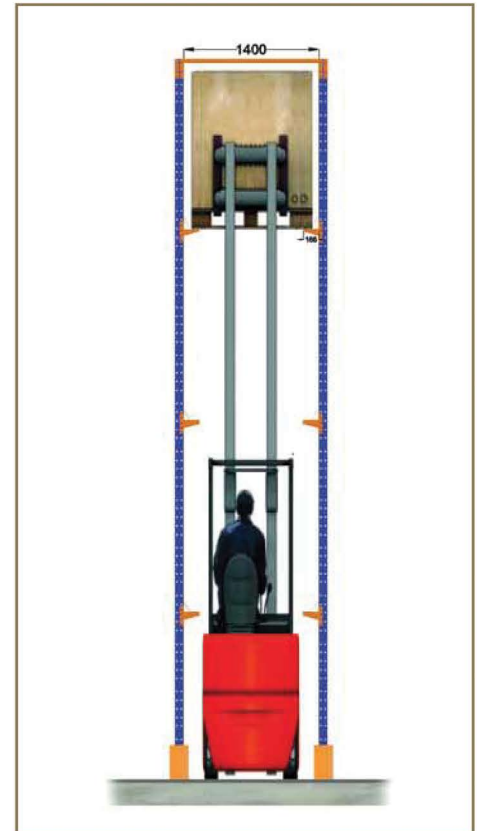


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2- Impacts from the forklift truck. In accordance with the guidelines and recommendation, the calculation makes allowance for an impact to the value of 35 kg from a forklift truck, at the least favorable point (figure 1).

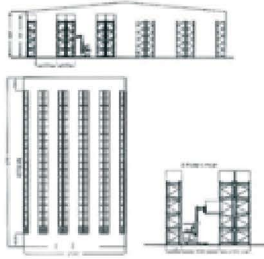
3- Maximum deformation of the uprights. The calculation should consider that the maximum deformation of the uprights must not exceed 25 mm (figure 2) when forces and reaction from vertical and horizontal loads are applied. The fact that the load may overhang the pallet has a huge influence on the dimension and length of the supports and therefore also on the calculation of the uprights, the longer the support, the greater the pressure exerted on the upright, so the edgings used should in turn be stronger.

4- Minimum pallet support. As a safety measure, if the pallet is displaced completely over to one side, there should be a minimum support of 30 mm on the other side (figure 3)

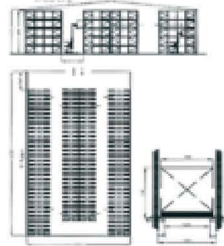


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PALLET RACKING

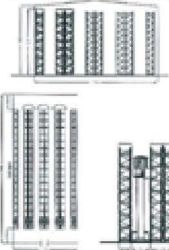


5 Pallet Height
Building Area = 1698sqm
Using Reach Trucks
Average Locations used 90%
Immediate accessibility 100%
Stock Rotation Good
Floor Utilisation 40 %



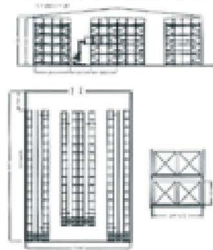
5 Pallet Height
Building Area = 1170sqm
Average Locations used 70%
Immediate accessibility 25%
Stock Rotation Poor
Floor Utilisation 65 %

VERY NARROW AISLE



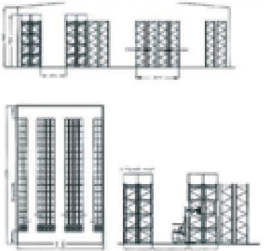
8 Pallet Height
Building Area = 950sqm
Using Narrow Aisle
Average Locations used 90%
Immediate accessibility 100%
Stock Rotation Good
Floor Utilisation 45 %

PUSH BACK PALLET RACKING



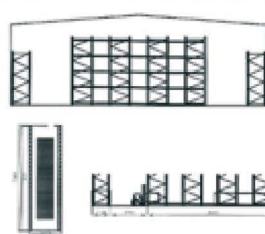
5 Pallet Height
Building Area = 1119sqm
Average Locations used 70%
Immediate accessibility 25%
Stock Rotation Poor
Floor Utilisation 65 %

DOUBLE DEEP PALLET RACKING



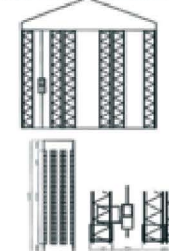
5 Pallet Height
Building Area = 1225 sqm
Average Locations used 90%
Immediate accessibility 50%
Stock Rotation Average
Floor Utilisation 45 %

PALLET LIVE STORAGE PALLET RACKING



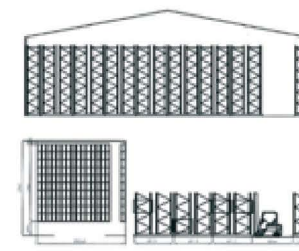
5 Pallet Height
Building Area = 1.174sqm
Average Locations used 75%
Immediate accessibility 25%
Stock Rotation Good
Floor Utilisation 55 %

AS/SR PALLET RACKING



5 Pallet Height
Building Area = 1119sqm
Average Locations used 70%
Immediate accessibility 25%
Stock Rotation Poor
Floor Utilisation 65 %

MOBILE PALLET RACKING



6 Pallet Height
Building Area = 766sqm
Average Locations used 90%
Immediate accessibility 100%
Stock Rotation Good
Floor Utilisation 70 %

Item	Pallet height	Building area SQM	Average location %	Immediate accessibility	Stock rotation	Floor utilization
Pallet raking	5	1698	Used 90 %	100%	Good	40 %
Drive in	5	1170	Used 70 %	25%	Poor	65%
VNA	8	950	Used 90 %	100%	Good	45%
Push Back	5	1119	70 %	25%	Poor	65%
Double Deep	5	1225	90 %	50%	Average	45%
Pallet live storage racking	5	1174	75 %	25%	Good	55%
AS/RS	11	675	90 %	100%	Good	50%
Mobile pallet Rack	6	766	90 %	100%	Good	70%





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