Double deep racking

Introduction

Double deep racking stores two pallets deep in a single entry rack or four pallets deep in a double entry rack.

This system requires the use of a special reach fork lift truck with either dual pantograph or sliding fork attachments.

Double deep racking improves storage density with fewer aisles and more storage locations. This reduces the aisle to rack ratio but also reduces selectivity (FIFO). Truck lift heights are limited by load, to about 9 metres.

The upper levels can be fitted with front to back guide rails to assist the operator to locate and place a pallet at height. The bottom beam must be sufficiently clear of the ground to allow the reach trucks legs to pass under it.

Features

- Storage density increased as rack aisle ratio changes from selective racking.
- 50% immediate accessibility with reasonable stock rotation.
- Good use of all available locations, typically above 90%.
- Safe and secure handling with the bottom pallet usually off ground.
- Ability to use double deep handling equipment for other tasks.
- Best used when each SKU has several pallets.
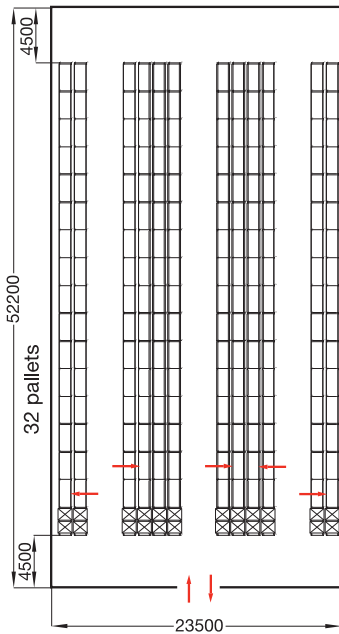
Vital statistics

Average locations used	88%
Immediate accessibility	50%
Stock rotation	Average
Average floor area by pallet position (sqm)	0.60

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Example configuration
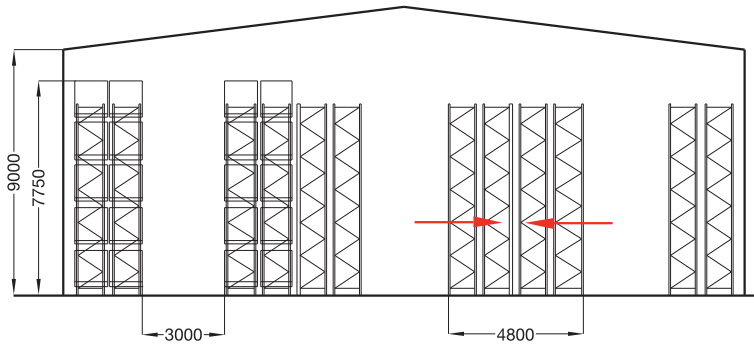
Double deep example for 2040 pallets

- Pallet and load size:
  1165mm (entry) x 1165mm x 1350mm (H)

- Floor area:
  52.2m x 23.5m = 1225 sqm

- Total building volume:
  11028 cbm (9m high)

- Average floor area/pallet position:
  1225 sqm/2040 pallets = 0.60 sqm/pallet position

- Average building volume/pallet position:
  11028 cbm/2040 pallets = 5.41 cbm/pallet

5 pallets high