

Taking Case Picking in Cold & Freezer Stores to a Higher Level

HIGH DENSITY MULTI-TIER CASE PICKING MEZZANINES



CASE PICKING IN COLD STORES

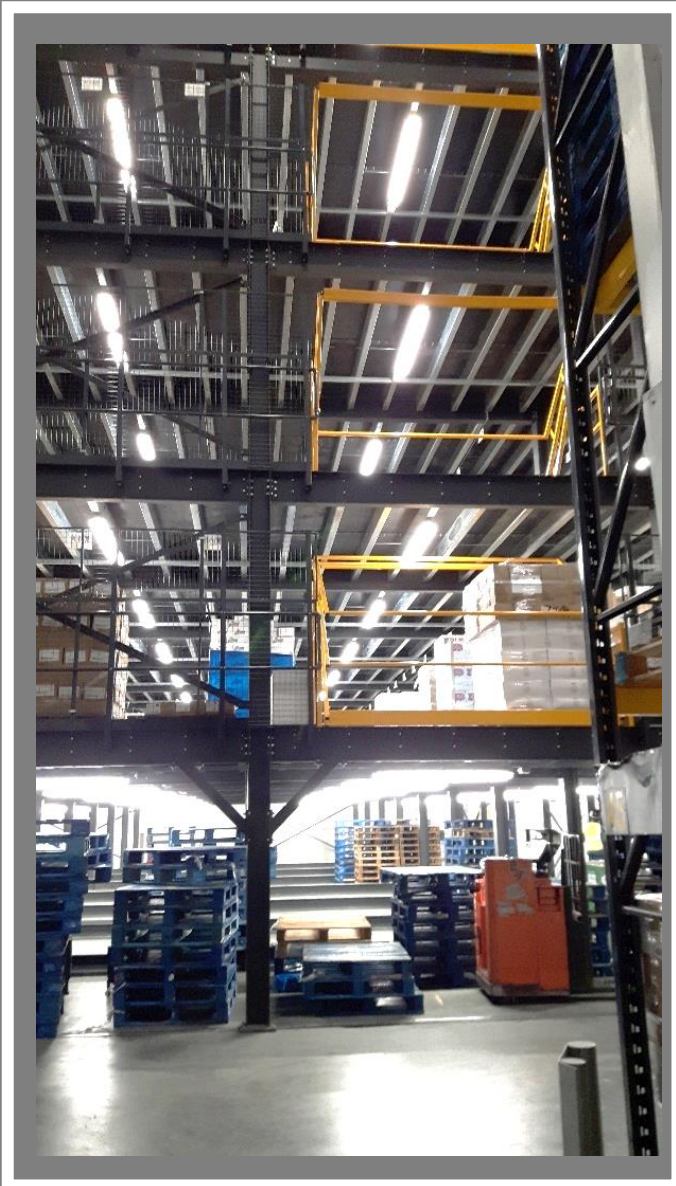
One of the biggest challenges in managing and running a modern-day cold store facility is how to pick individual cases as opposed to full pallets. In the past most cold store facilities were set up for full pallet distribution. In and out. However, due to supply chain developments, an increasing number of cold stores must efficiently handle case picking as well as full pallets and very often at the same time.

As a supplier of high-density mobile racking systems to the cold store sector. Barpro has seen an increasing demand for cold store case picking.

Options are available for case picking in cold stores include:

Case picking from:

- the bottom level of a static racking in cold stores.
- the bottom level of a mobile racking System in cold stores
- pallets placed on the floor in the airlock/ dispatch receiving area.
- all levels of static racking in cold stores using a man up turret truck
- from automated picking system.



Case picking from multitiered mezzanines strategically placed inside Cold & Freezer stores have great potential in maximizing volume utilization.

Seeking solutions for our customers, Barpro Storage approached UK cold stores, to see how they have developed with the case picking challenge

MARKET LEADING UK COLD STORAGE COMPANY

Which delivers and stores frozen food for EU and UK manufacturers, has pioneered the use of in-store flooring systems designed for case picking.



Multi-tier structural mezzanines in UK cold stores have progressed in the last 30 years into an effective, space saving and super-efficient case picking solution, especially in mobile racked stores.

The number of structural mezzanines in UK cold & freezer stores confirm that this solution can offer significant benefits to operators.

HOW DO THEY WORK?

3 to 5 levels of floors which are interconnected by stairwells that are installed in a corner or outside the cold & freezer store, taking up the least space possible while offering the required quantity of pick faces and best utilization of storage Volume.



Reach trucks retrieve full pallets from the mobile racking and feed them onto the floors via 1 or 2 pallet gates or on to 2 deep gravity feed picking lanes for fast movers. Pallets in the pallet gates which are normally medium and slow movers are transported by staff using pallet jacks to dedicated picking locations.

On picking, cases are transferred to pallet jacks and then transported back to the pallet gates for the reach truck to place them in a staging area, which could either be static racks alongside the mezzanine or the floor on the bottom level. Pickers have free and uninterrupted access to picking aisles on safe mezzanines which are away from the path of reach trucks.

WHAT BENEFITS DO THEY OFFER COLD STORAGE OPERATORS?

EFFICIENCY

Dedicated picking area where pickers can pick uninterrupted by reach trucks moving in the aisles.

In Australia it's illegal to have pickers and reach trucks operating in the same area. Reach trucks can get on with their work not worrying about pickers.

SAFETY

Reduced accidents between pickers and reach trucks due to 1 and 2 above.

No chance of product from upper static racks falling on pickers walking in the open static rack aisles.

CONDENSED STORAGE AREA

Best solution to achieve the amount of pick faces required which is a challenge with growing product ranges and new customers.

All pick faces on floor level. No need for costly material handling equipment to pick from 2nd, 3rd or even 4th pallet level.

Smooth and efficient replenishment of the pick face between reach-truck and pallet jack operators.

Results in smooth and Efficient replenishment of the pick face between reach-truck and pallet jack



BENEFITS (2)

SPACE SAVING

The whole volume of the cold store is being used. With vertical floor pitch at around 2.5 m very little volume is wasted.

Mezzanines are tucked into the side or corner of the cold room only 1 aisle is required for the reach truck to feed it. Reducing number of aisles required and increasing income generating storage capacity.



Another potential benefit of is the opportunity to implement 'pick by voice' technology. As pickers and reach trucks are not in the same aisle the picker doesn't have to listen out for potentially dangerous reach trucks. Pickers can now listen to the picking instructions through head set technology. This can take picking efficiency to an even higher productivity level.



TECHNICAL FEATURES (1)

THE STRUCTURE



Includes the support columns, main beams, joists and all nuts and bolts and fixings. Joist pitches are designed to support floor and weight capacity.

Our design ensures that the floor has 3 points of support. On the outside and middle of each section of flooring.



Handrails and kick plates

On all open sides of the mezzanine and staircases excepting on the on-loading side of the gravity feed picking lanes. This is to ensure a safe working environment for personnel.



Staircases

Connecting the different levels.

TECHNICAL FEATURES (2)



Pallet gates (PG)

Normally 2 gates level for load on and load off. The pallet gates ensure that pickers are never exposed to an open side of the floor. Pallets are loaded and unloaded on and off the mezzanine floors through the pallet gate.



Column Protectors

Each column will be protected by a heavy-duty protector to prevent damage caused by forklifts and other material handling equipment.



Fixings

For the main beams, secondary beams and support columns are electro plated nuts and bolts. All the support columns will be fixed to the floor with “expanding type” industrial anchors.

TECHNICAL FEATURES (2)

Design

The latest design technologies are utilised and all designs are generated by competent operators. Mezzanine are designed in accordance with the guidelines stipulated in the SABS 0162 code of practice, Part 1 and 2. All engineering designs are verified by a qualified Structural Engineer.

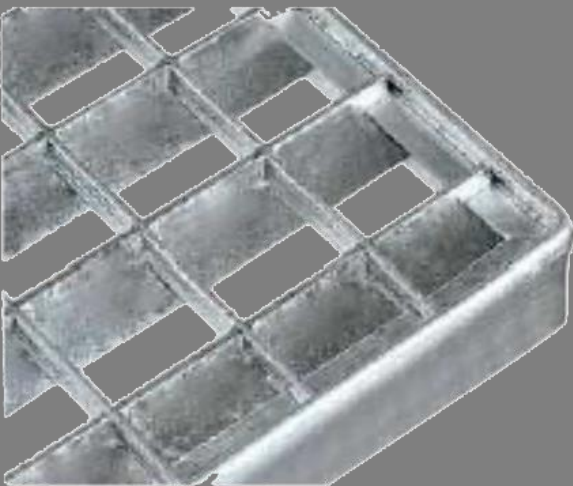
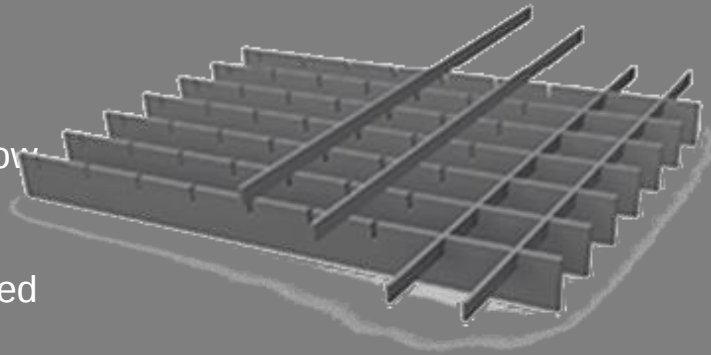
Finish

All materials and components are chemically treated and washed prior to receiving enamel paint.

1. Flooring

We recommend grated flooring that can provide ventilation and air circulation on all levels. The spacings are also small enough for pallet jacks and trolleys to flow smoothly over.

Floor sections are rectangular and framed and fixed to the joists of the support structure



TECHNICAL FEATURES (2)

2. Gravity Feed Picking Lanes (Optional)

For fast moving products to improve efficiency and throughputs. Pallets are loaded onto the picking lanes by reach truck and flow from the load in position to the picking position when called / released by the picker on the mezzanine.

The speed of the pallet is controlled to 0.3 m/sec by a speed controller and a pallet separator separates the pallet in the pick position for safety as well as to give the picker free access to remove the empty pallet. Boxes are picked off the pallet onto a trolley or pallet on a pallet jack. When the pallet is empty the picker will remove the empty pallet and stack them in an empty pallet stack location.

The picker will then release the separator to allow the pallet in the load on position to flow into the picking position. The on-load position then becomes available for the reach truck to load another pallet. The high-quality speed controllers and foot release pallet separator ensure a safe working environment for the pickers.





Multi-tier mezzanines can give a significant edge over competitors especially in the field of 3rd party cold storage distribution. Let us help you create that edge.

**LET US HELP YOU TAKE YOUR COLD STORE OPERATION
TO A “HIGHER LEVEL”**

Cape Town

+27 (0) 21 552 9190

Johannesburg

+27 (0) 11 392 1702

Durban

+27 (0) 31 942 3200



BARPRO
STORAGE SA (PTY) LTD