In Pallet Carrier/Under Pallet Carrier.

Jungheinrich Compact Shuttle Systems.
Efficient multi-depth storage.
Pallet carriers that can travel independently in racking channels are at the core of the Jungheinrich compact shuttle storage systems. They are part of a Jungheinrich complete solution, consisting of channel racking, carrier truck and carrier modules.

Shuttle systems are therefore designed for:
- Handling whole pallets,
- Batch storage,
- Cold store applications,
- Replenishment in picking tunnel systems and
- Buffer storage location applications.

The unique thing about Jungheinrich shuttle systems is that they are designed either to go under pallets (Under Pallet Carriers, UPCs) or to enter pallets (In Pallet Carriers, IPCs). Jungheinrich offers a range of versions to suit individual needs.

The consistent solution.
Compact warehouse systems for maximum cube utilisation.

This allows you to expand the performance range of traditional compact storage systems – saving space by eliminating working aisles – and achieve improvement potential in terms of the degree of filling, turnaround, variety of articles, cube utilisation and care of the load.

The following pages give more detail on the two systems. Your Jungheinrich Sales Manager will be happy to discuss your personal requirements at your premises to see which solution is the most economic for your requirements. Just as our customers all over the world have been accustomed for over 60 years.
Your tools:

The carrier trucks
All trucks with an FEM fork carriage can be used to transport and change over the carriers. This ensures that they can be used both in wide and narrow aisles.

Channel racking
The proven Jungheinrich pallet racking acts as the basis. Depending on the carrier type used, uprights and support bars are assigned to channels. Each channel is equipped with specially adapted guide rails which ensure the carrier travels in safety.

The In Pallet Carrier (IPC)
The IPC enters its forks into the pallet. For transporting outside the racking system the truck lifts the carrier and the pallet instead of the forks. The carrier docks onto a specially modified interface on the carrier truck.

The Under Pallet Carrier (UPC)
The UPC loads the pallet onto its platform. It can move independently in the channel and enter stored pallets from beneath. To work in another channel the truck loads the carrier onto its forks and moves it into the required channel.

Cube utilisation level [%] = occupied room volume [m³] / total room volume available [m³] x 100
Two systems – One goal.

Typical
In Pallet Carrier:

- High turnaround levels with frequent channel changes (e.g. due to small number of pallets per item, shorter channels, combined orders from various articles or replenishment in picking tunnel systems).
- Pallets are picked up by the carrier truck directly with the IPC and used together in the channel. Stacking can now begin immediately.
- Lifo (last in first out) can be achieved easily.
- Fifo (first in first out) can be achieved by changing over the shuttle or using a second shuttle.
- Different pallet types can be used in the same racking system.
- Ideally suited to Jungheinrich trucks through individual interface and optimum residual capacity utilisation.

Typical
Under Pallet Carrier:

- High turnaround levels with frequent channel changes (e.g. due to small number of pallets per item, shorter channels, combined orders from various articles or replenishment in picking tunnel systems).
- Lifo/Fifo (last in first out / first in first out) are easy to achieve.
- When a channel is to be completely cleared (e.g. for a delivery order) the UPC automatically brings each channel pallet directly to the retrieval side. The pallet is removed by a fork lift truck and taken to goods outward. This function can also be performed for a specific number of pallets from a channel.
- Racking channel compression: if no stacking/retrieval operations are taking place (for example at the end of a shift), all the pallets can be transported automatically to the retrieval side.
Two shuttles – Covering all solutions.

Pallet handling with the
In Pallet Carrier:

- Different variants ensure they can be adapted to suit a range of applications:
  - Euro pallets lengthways,
  - Euro pallets crossways,
  - Industrial pallets lengthways,
  - Industrial pallets crossways,
  - With manually moving stop for handling up to three different pallet sizes in the same racking system,
  - With four forks for simultaneously storing two semi-pallets next to each other in the same channel. A centre rail for the rack channel is available for this type of storage as well as for:
    a) Storing pallets with a large deflection
    b) Pallet length storage.

- All Jungheinrich trucks with an FEM fork carriage can be used. This ensures that they can be used both in wide and narrow aisles.
- Other carrier versions on request.

Pallet handling with the
Under Pallet Carrier:

- Different variants ensure they can be adapted to suit a range of applications:
  - Euro pallets crossways,
  - Industrial pallets crossways,
  - Combi carriers with sensors to detect the pallet size for using Euro and industrial pallets in the same racking system,
  - Chemical pallets.

- All Jungheinrich trucks with an FEM fork carriage can be used. This ensures that they can be used both in wide and narrow aisles.
- Other carrier versions on request.
Direct Customer Service network
Our own service engineers are available countrywide in various locations. Every one of them is a Jungheinrich professional: mechanic, electrician, electronics and hydraulics specialist combined in one person. And he will usually be with you within four hours.

For the right truck the right racking
Jungheinrich provides you with the complete solution: comprehensive warehouse planning that sees truck and racking as a system working “hand in hand”. From projecting via CAD planning to handing over the key. From shelving via system-built platforms right up to high bay racking. From consultation via assembly to Service. Everything from one supplier. Everything from Jungheinrich, your “architect” for complete internal logistics.

Financial Services and Rental Service
Jungheinrich provides you with a number of tailor-made solutions that optimally adapt to your general economic, tax and balance sheet conditions – even if these change during the course of time. So that you always react flexibly. Your specialist adviser will be pleased to calculate which solution would be the most optimal for your application.

Benefits to please the whole company.

Pallet trucks, forklift trucks, order pickers and tow tractors in more than 600 truck variants. Added to this is a multitude of additional services. This makes Jungheinrich into an internal logistics services provider who will pave your way towards a complete logistics solution.

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