

THE MATERIAL HANDLING GUIDE

# Choosing the right truck for the job

# A world of choice, for every operation

There's a huge range of trucks currently on the market, and new trends and demands in a changing industry mean that innovation in materials handling equipment isn't going to stop any time soon.

Trucks are the backbone of any warehouse operation, and in certain stages of the supply chain, particularly during a costly stage like order picking, the choice of truck can have a big effect on efficiency and your bottom line.

But choosing the correct truck can be difficult. Your warehouse, your drivers, and the kind of goods you handle can affect the decision. And certain trucks, such as stand-in stackers, are versatile machines, which can be used for a number of different operations, depending on your needs.

In this short visual guide, we'll try to show the range of trucks which are available, highlighting their general capabilities and advantages.

Procuring new trucks can be an expensive and important process - so having the knowledge could give you an advantage over your competition.



This ergonomic reach truck is fitted with a tilting seat, which lets the driver easily get a clear view of his forks when he's removing or placing pallets in high racks. Paying attention to ergonomics can deliver big productivity boosts in high-intensity operations.

# Trucks for loading and unloading

Loading and unloading can be carried out with standard trucks or with special trucks.

For work on loading bays and driving onto the platforms of lorries and containers, there are a number of particularly efficient trucks, as well as pedestrian operated trucks both with and without masts.

If the work is done from ground level, counterbalance trucks are preferable. They have large wheels and can drive up to lorry platforms without the wheels of the lorry getting in the way. Reach trucks and stackers with telescopic forks are also used.

For long goods, four-way reach trucks can be used for loading/unloading.

The distance which the goods have to be transported is also important when choosing the truck. For long travel distances, a seated driver is more efficient. Transfer with a ride-on driver is also 40% faster than with a walking driver if the distance is about 25 metres.

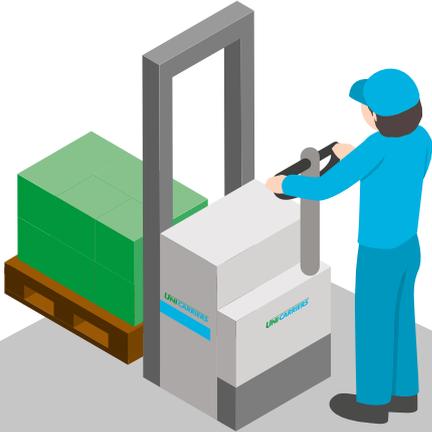


This powered pallet truck with platform is a common choice for loading and unloading and provides a faster and more ergonomic alternative to a pedestrian truck without a platform.



### PEDESTRIAN-OPERATED PALLET TRUCK

Efficient and flexible aid for loading/unloading when the distance to the reception area is short.



### PALLET-TRUCK FOR STAND-ON DRIVER

Can give up to 40% quicker transport by comparison with pedestrian truck. Has the performance for problem-free loading/unloading.



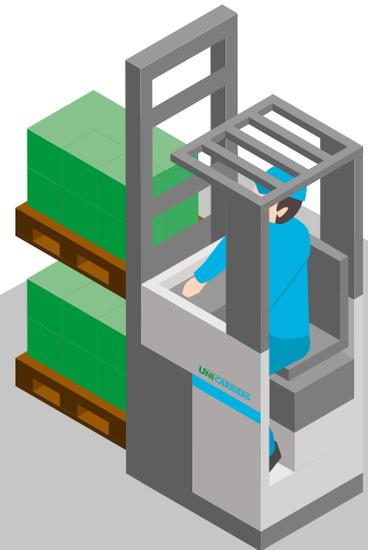
### SITTING DRIVER FOR LONG CYCLES

Good comfort and high load capacity. Bogie wheels compensate for bumpy floors. Lift height suitable for roller conveyors. Removes operator fatigue as a performance limitation.



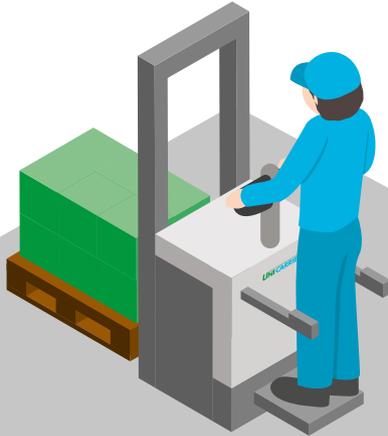
### RIDER STACKER WITH STRADDLE LIFT

Can carry two pallets at the same time. Good comfort and high capacity for longer cycles. Can set down pallets at levels 1 and 2 and on conveyors. "Dual cycling" can greatly improve productivity in the right environments.



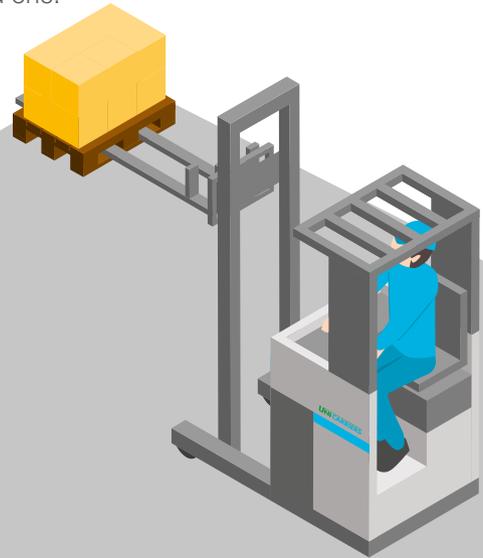
### PEDESTRIAN STACKER

Can load/unload from ground level. Suitable truck if the goods are to be taken directly to the racking and into stock.



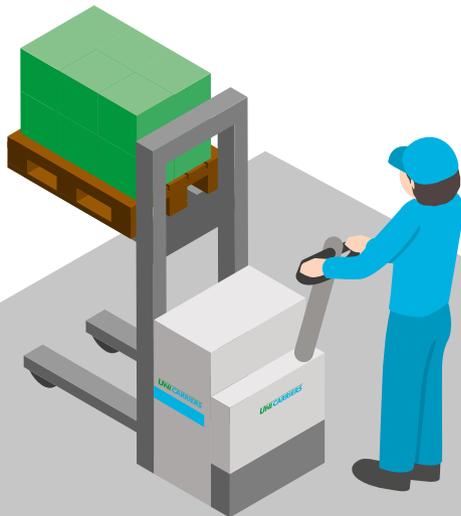
### STACKER WITH TELESCOPIC FORKS

Can load/unload from ground level. Telescopic forks allow the truck to access pallets two locations deep rather than the standard one.



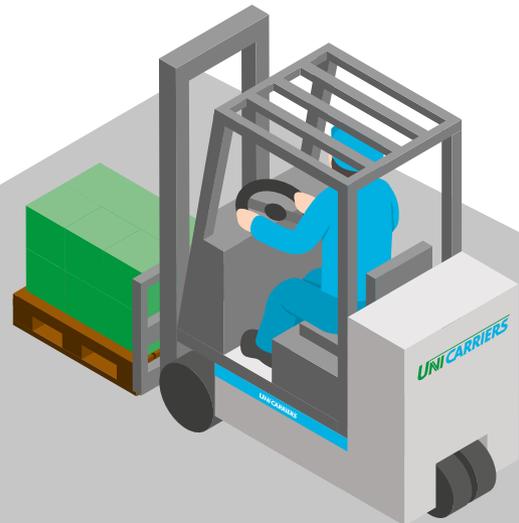
### TERMINAL TRUCK

Can load and unload goods at two levels quickly and efficiently.



### COUNTERBALANCE TRUCK

Can load/unload from the ground and from the bay. Tires are suitable for both indoor and outdoor use. A cab also gives the driver additional comfort in poor weather conditions.



# Trucks for intake and retrieval of unit loads

Requirements for intake and retrieval of unit loads will vary depending on the application. For example, will the goods be stored in conventional wide-aisle racking or in a very narrow aisle (VNA) solution?

The nature of the handling also has to be taken into account. Long cycles and continuous use call for better ergonomics and greater comfort. Some types of truck for intake and stacking can also be used for order picking, e.g. the combi truck.

Side shift and fork spread are essential for some kinds of handling. As are specialised lifting and gripping devices such as slip sheets, spikes, clamp units, etc.

For handling unit loads in cold and freezer stores, a comfortable cab is also a necessity. Without a heated cab, the driver must wear thick clothing and gloves and is still limited to short periods of work between regular breaks outside of the cold temperatures. A good heated cab allows a driver to continue working for the whole shift, greatly increasing productivity while also working more safely. Electrical and hydraulic systems must be adapted to the work environment.

Counterbalance trucks, too, may be used for stacking. They are suitable for block stacking, free stacking or when loads exceed 2 tonnes.





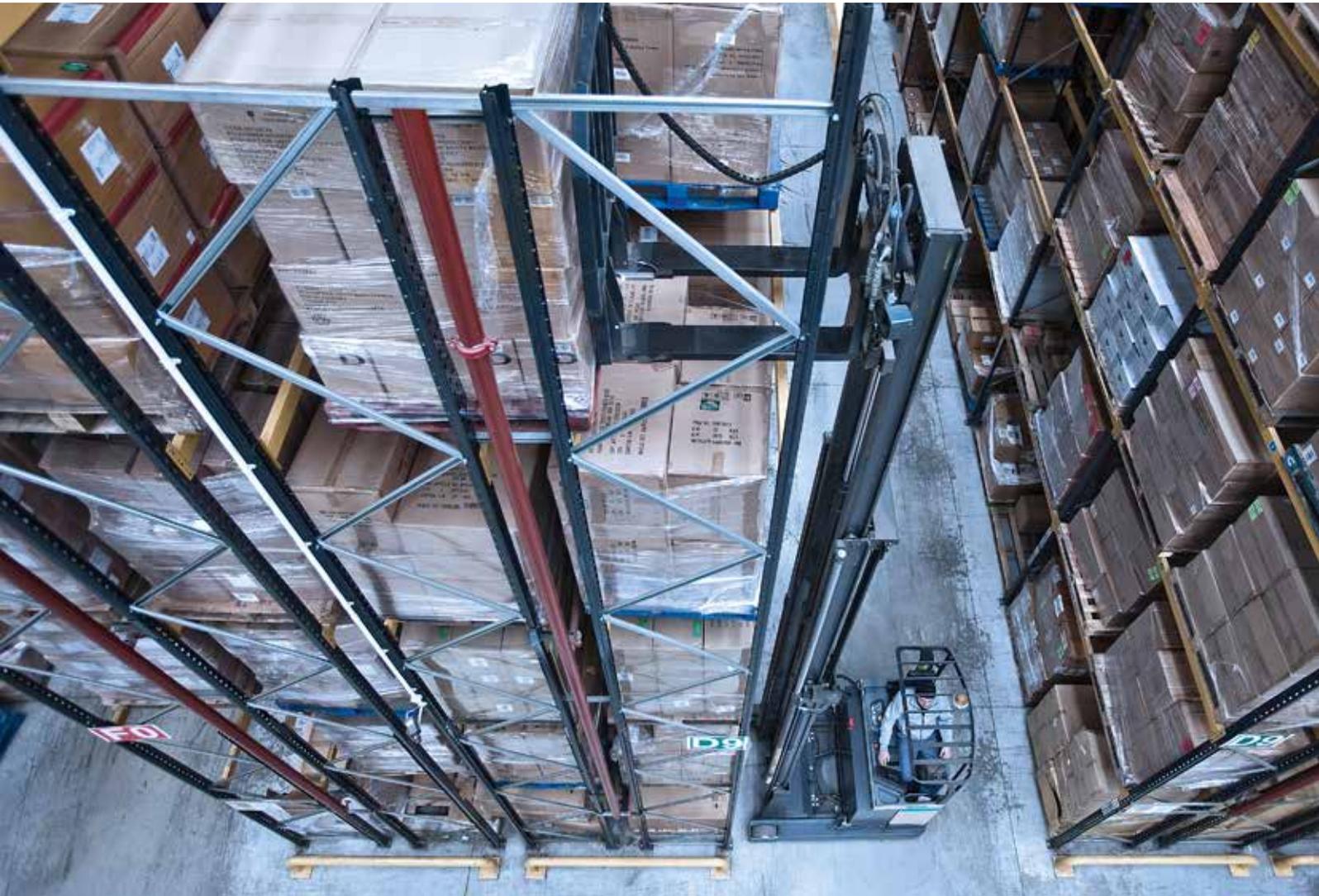
UNICARRIERS

UNICARRIERS

Ergonomic design can lead to major efficiency gains by making the forklift easier and faster for the driver to operate. It also reduces strain on the driver's body which can lead to injury, also reducing costs caused by staff absences and lowered productivity.



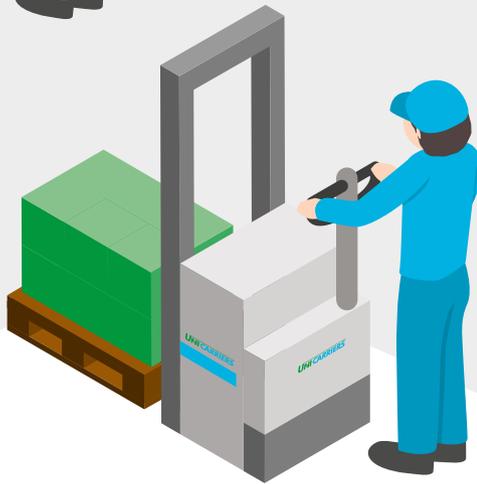
Efficiency and safety. In dense-storage warehouses, telescopic forks are ideal. The trucks can range freely all over the warehouse.





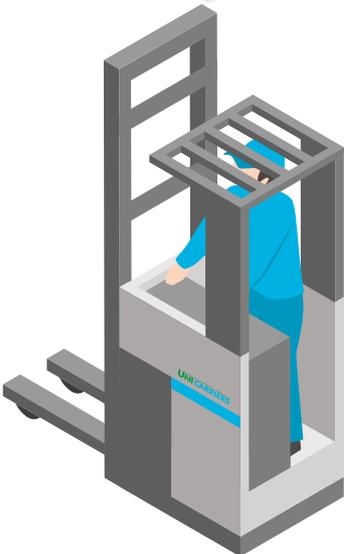
### TRANSFER TRUCK WITH LOW MAST

Efficient transport because the truck can take two pallets. Stacks to levels 1 and 2 and on conveyors or work tables



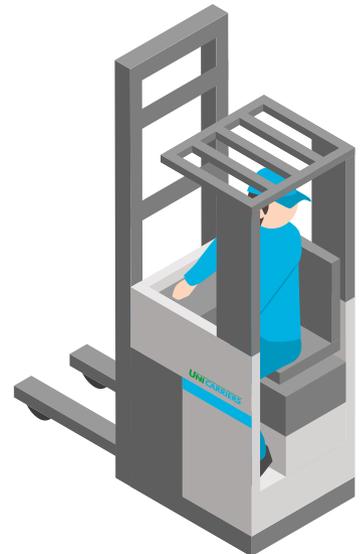
### PEDESTRIAN STACKER

Intended for simple duties and stacking up to 4.8 metres. For ride-on drivers, an aisle width of 2.7 metres is needed.



### RIDER STACKER

Space-saving truck in two versions – stand-on and sit-on. Lifts more than 6 metres. Very efficient handling at low capital cost.





### STACKER FOR DOUBLE-DEEP STORAGE

The telescopic forks make it possible to stack pallets two deep for high density storage. The truck is available in stand-on and sit-on versions.

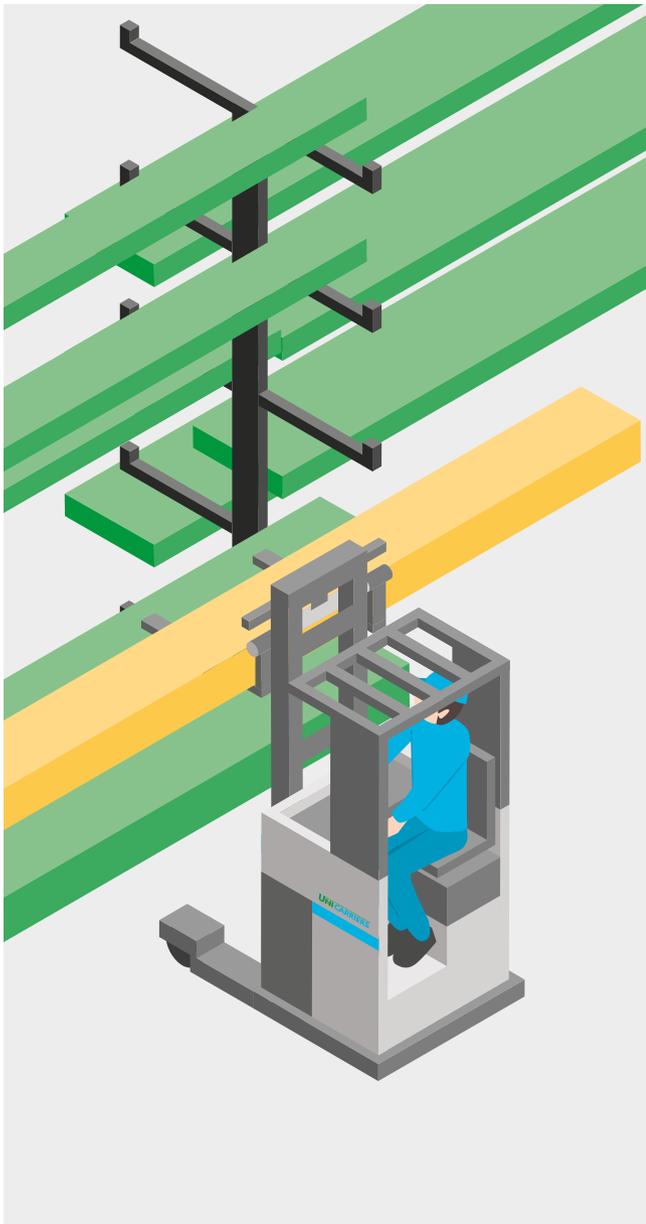
### REACH TRUCK

For high capacity. Good ergonomics makes handling comfortable. There are reach trucks with many load capacities and lift heights over 13 metres. Reach trucks with telescopic forks permit storing two deep.



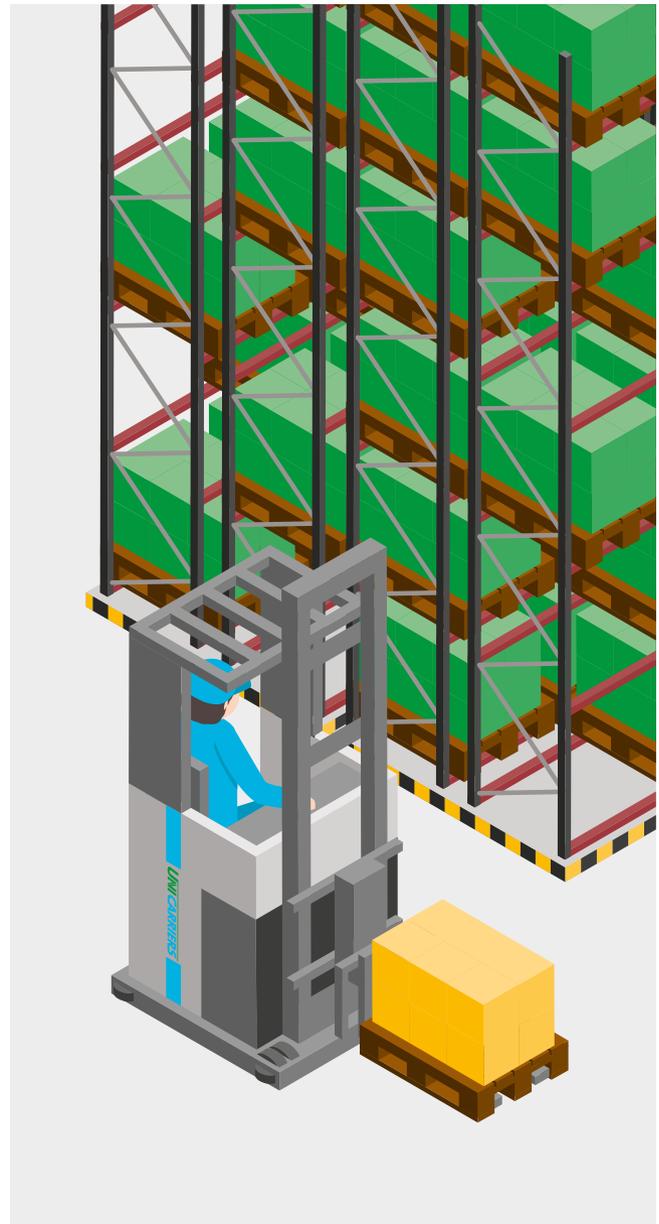
### MAN-UP COMBI TRUCK

The combi truck can be used for both stacking and picking. The forks swivel 180°, allowing pallets to be handled from both sides of the aisle. Pallets can also be lifted direct from the floor. The combi truck operates in very narrow aisles (VNA) that are only a little wider than the truck. A guidance system is used to allow the trucks to move at high speeds along the aisles and also to lift the loads while driving (known as “diagonal travel”). These features make combi trucks quick, efficient and productive while working in the stacking aisles.



#### FOUR-WAY REACH TRUCK

A reach truck for handling bulky goods such as building boards, planks, pipes, etc. The truck can be driven in four directions, providing flexible goods handling. Aisle width can be reduced in relation to the load.



#### SWIVEL REACH TRUCK (MAN-DOWN VNA)

Very narrow aisle (VNA) stacker with forks that turn 180°. Unlike their bigger brothers, the combi trucks, the driver remains at floor level and these trucks cannot be used for order picking. But for full pallet movements, the swivel reach truck is very quick and highly productive. Based on the flexible reach truck design, these trucks are agile outside of the guided aisles, where the combi trucks must operate more slowly.

# Trucks for line picking

Picking is the most cost-intensive type of handling.

Therefore it is of the greatest importance for the picker to have the right truck for his work, and for the truck to have the right ergonomics and equipment for the task in hand.

Order picking with trucks can be divided into three categories: low-level, medium-level and high-level.

Low-level picking trucks are usually found where picking is intensive, such as in distribution warehouses. Picking takes place from levels 1 and 2.

Trucks for medium-level picking can also reach level 3.

High-level picking trucks come in a number of capacity ranges, permitting picking at up to 13 metres.

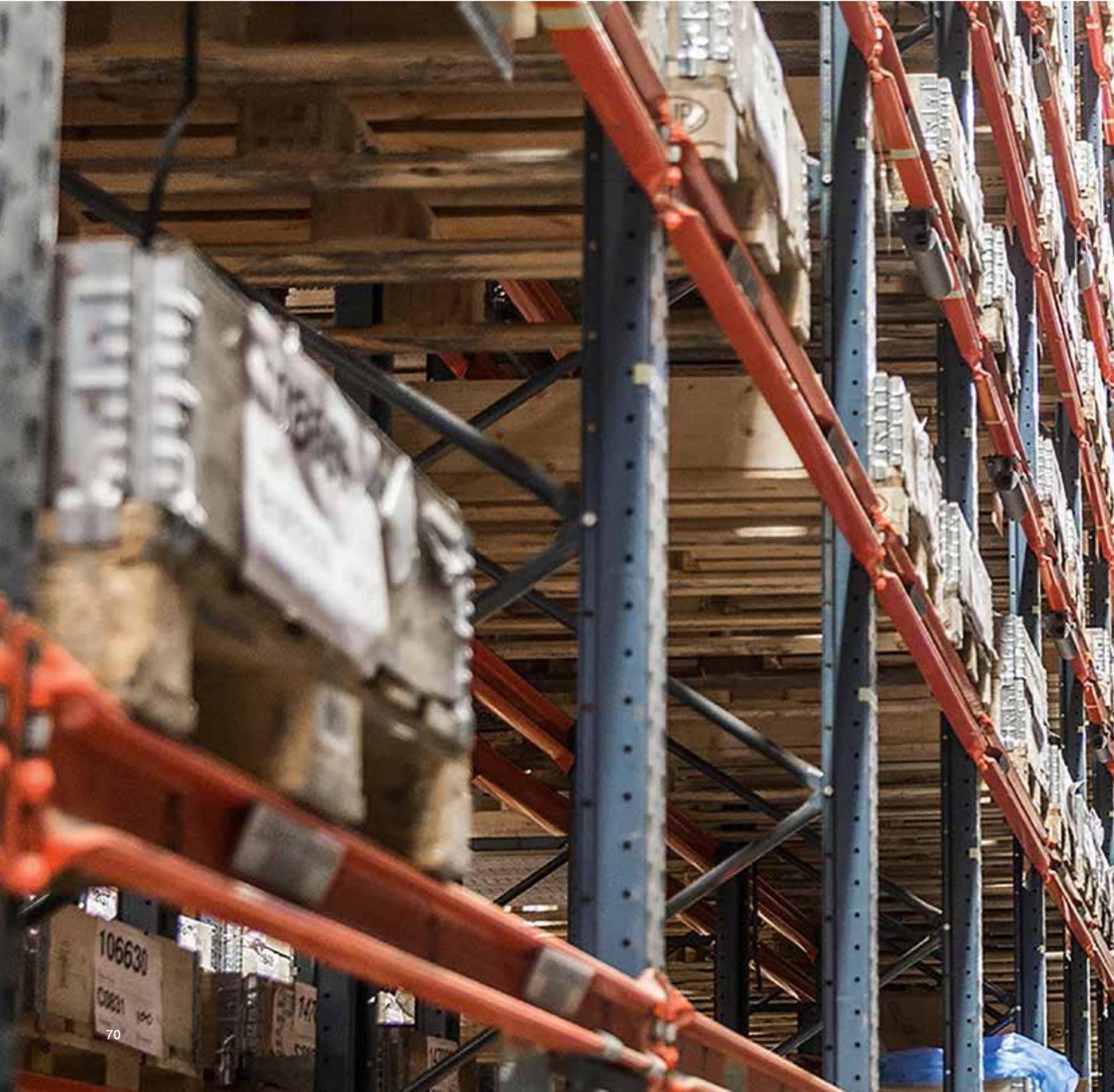
As far as efficiency and the driver's well-being are concerned, stability and safety are vitally important factors.



Low-level picking is the most demanding form of handling. With the right truck, the picker can attain maximum efficiency throughout the shift. Low-level picking trucks can be adapted to suit the type of picking, the level of picking, and the picker's own requirements. Adaptations can include wheel or tiller arms, vertically adjustable forks and rising platforms, as well as a variety of safety features.



Picking from high levels calls for a stable mast and comfortable handling.  
If used in a VNA (very narrow aisle) warehouse, the truck must be guided to allow fast and efficient but safe movement.  
“Diagonal travel” (lifting the main mast while travelling) is only permissible in guided aisles and greatly speeds up high-level picking.

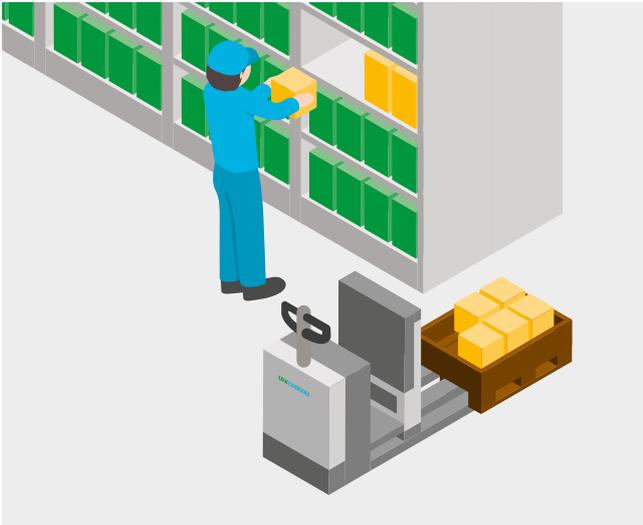




### LOW-LEVEL PICKING TRUCK

For picking from level 1 with the possibility of reaching level 2 via a step-up on the truck. Choice of steering wheel or tiller arm.

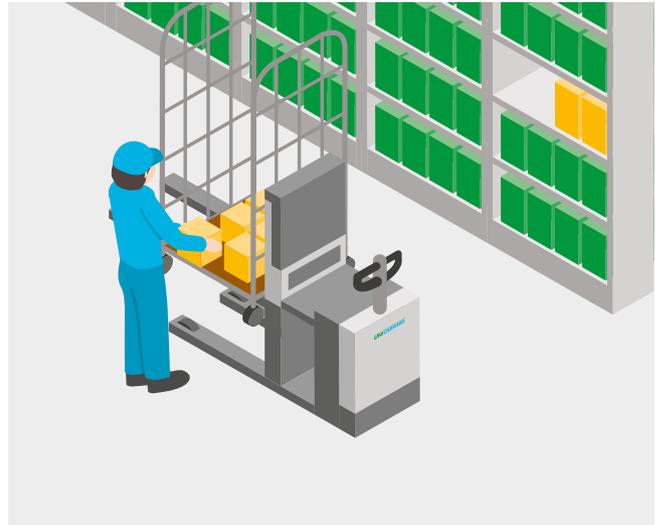
Forks for 1–3 load carriers.



### LOW-LEVEL PICKING TRUCK WITH RISING FORKS

For picking from level 1 with the possibility of reaching level 2 via a step-up on the truck. Choice of steering wheel or tiller arm.

Rising forks for ergonomic setting down of goods. 1–3 load carriers.



### LOW-LEVEL PICKING TRUCK WITH RISING PLATFORM

For picking from levels 1 and 2 via rising platform. Choice of steering wheel or tiller arm. Forks for 1–3 load carriers.

### LOW-LEVEL PICKING TRUCK WITH RISING PLATFORM AND FORKS

For picking from levels 1 and 2 with rising platform. Choice of steering wheel or tiller arm. Vertically adjustable forks for ergonomic setting down of goods. 1–3 load carriers.



### LOW-LEVEL PICKING WITH TRANSPORT TRUCK

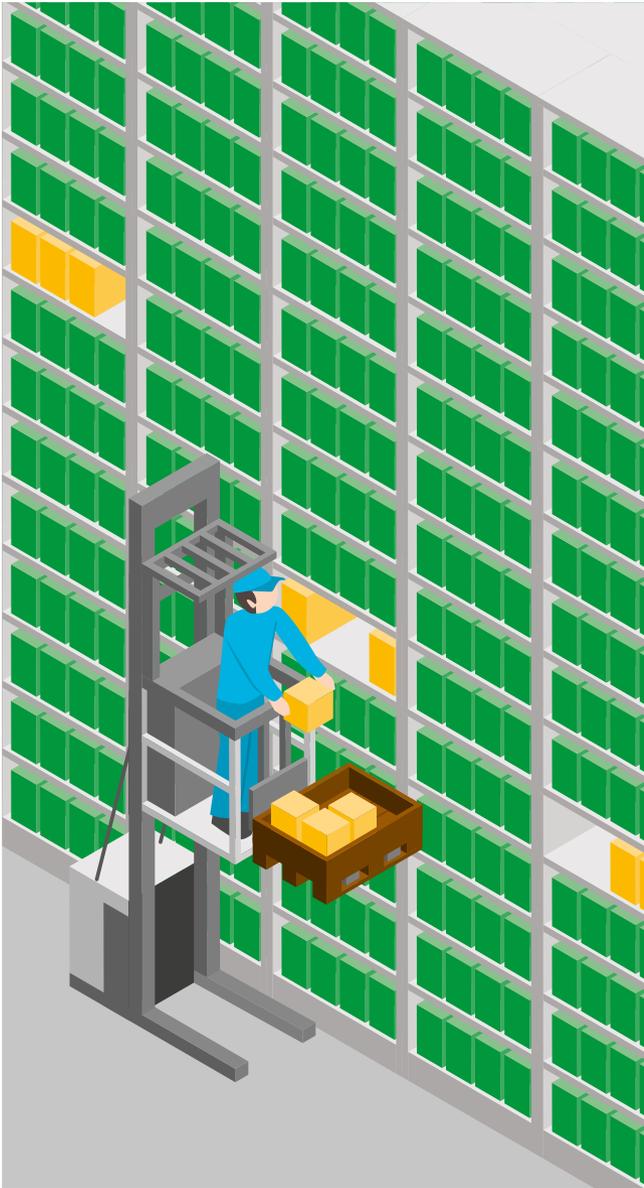
Provides flexible use of the truck, both as a picking truck and for transport, loading and unloading.



### MEDIUM-LEVEL PICKING

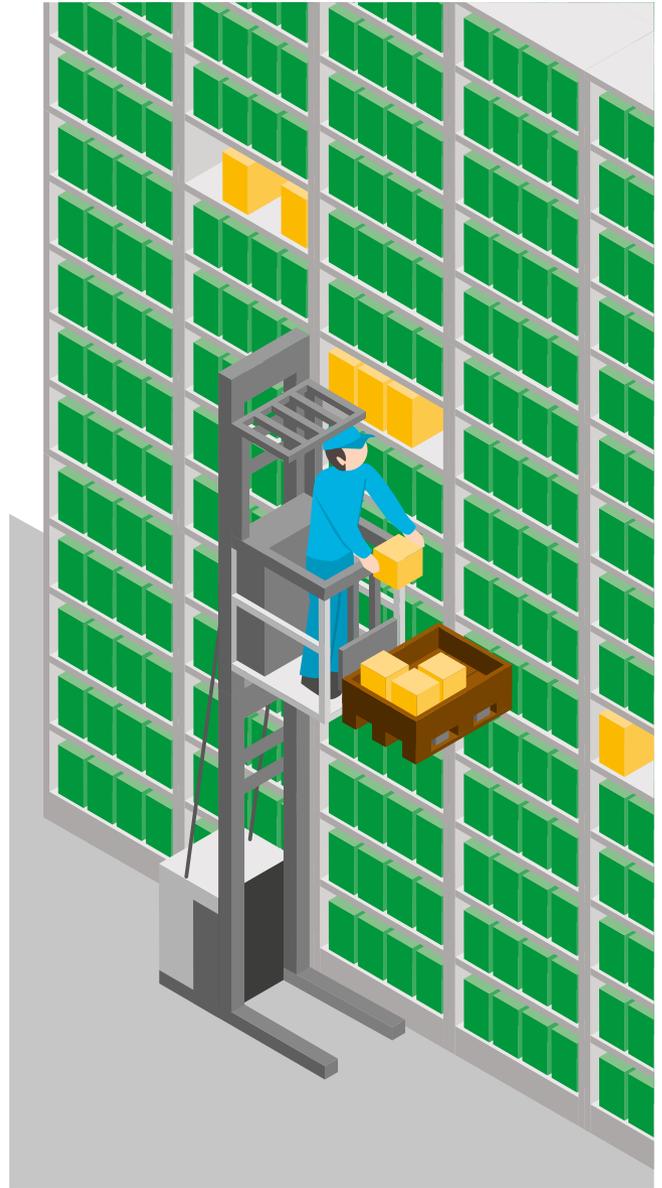
The platform lifts the driver and permits picking from levels 1, 2, 3 and 4 (depending on beam heights).

The truck can be adapted for different duties and, for example, fitted with a roller table for putting goods into material supply racking and a holder for empty pallets.



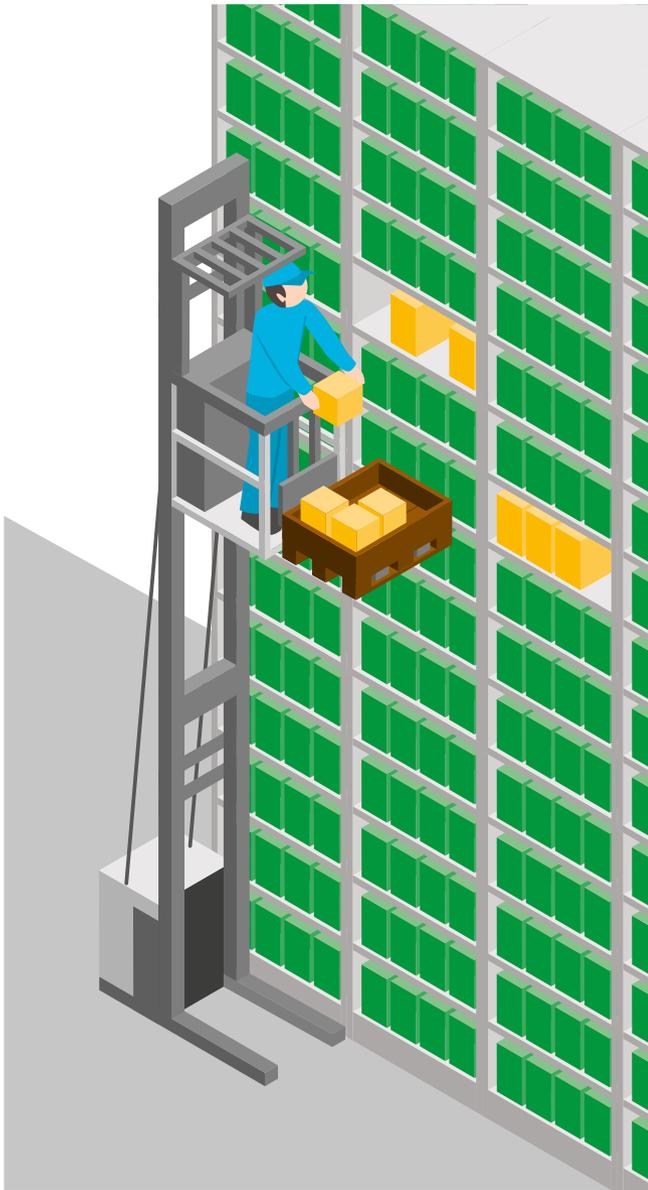
### HIGH-LEVEL PICKING TRUCK (UP TO 6.5 METRES)

For picking up to 6.5 metres. The truck can operate as a free-roaming truck within the warehouse or in guided VNA aisles. Independent fork lift for convenient setting down of picked goods.



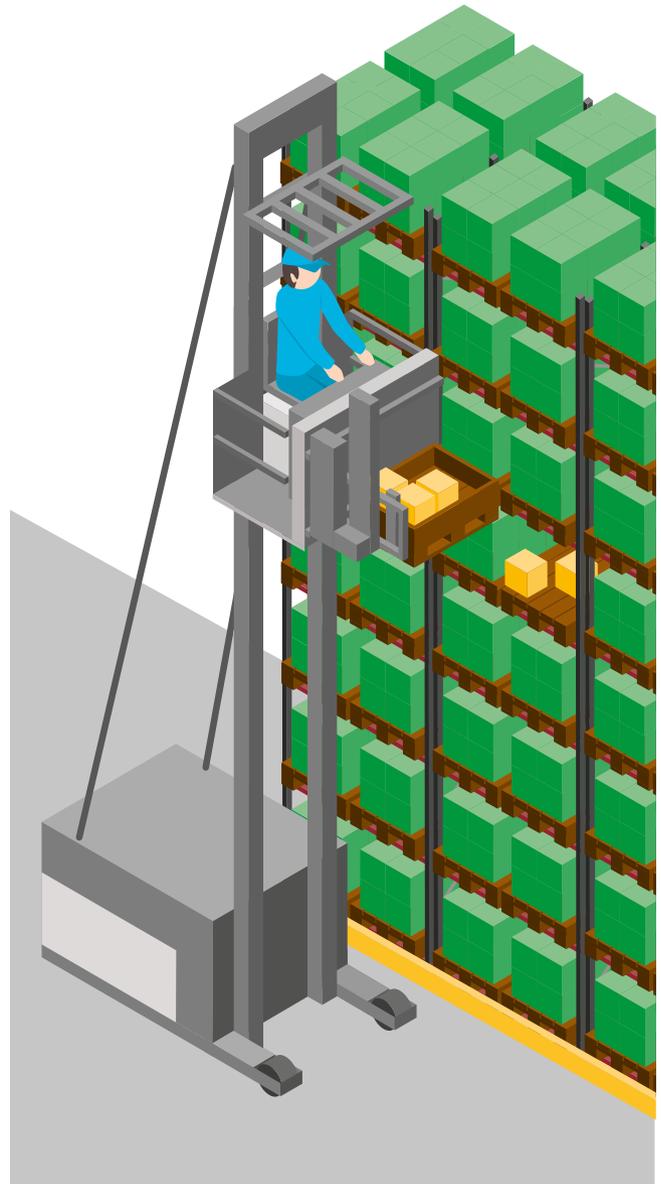
### HIGH-LEVEL PICKING TRUCK (UP TO 8 METRES)

For efficient picking at up to 8 metres. Quick adjustment to the next picking position (diagonal running). Free-ranging in the warehouse and rail-guided in VNA aisles. The truck can be fitted with a platform for picking bulky goods like furniture.



#### HIGH-LEVEL PICKING TRUCK (UP TO 13 METRES)

For picking up to 13 metres. Extra capacity and driver comfort. Commonly these trucks will be 48 V rather than 24 V due to the increased capacity demand. Independent fork lift for convenient setting down of picked goods. It is common for these trucks to operate in guided VNA aisles, possibly alongside a VNA stacker or combi truck.



#### HIGH-LEVEL PICKING TRUCK (UP TO 18 METRES)

For picking from 10 to 18 metres, a VNA combi truck may be more suitable. These trucks have swivel forks that can be used for both picking and stacking of full pallets. The forks include an independent fork lift for convenient setting down of picked goods on the load carrier. Combi trucks must always be guided inside the stacking aisle.