

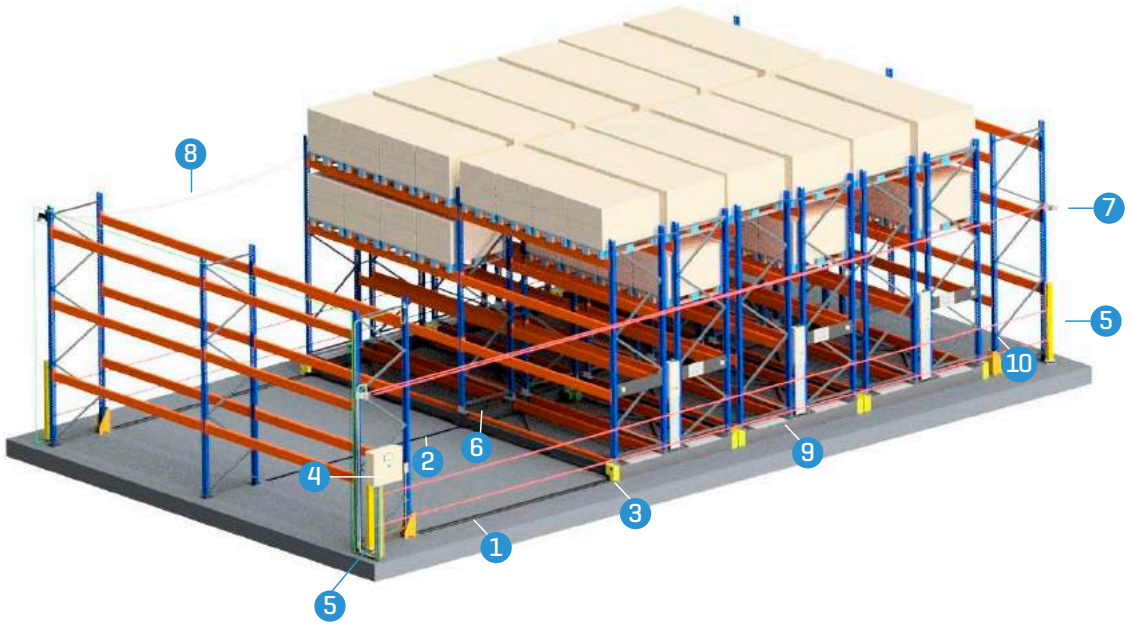
POWERACK®

stow
one brand, one company

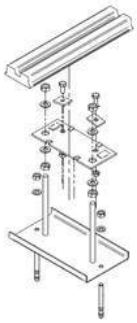
The ideal combination of compact storage
and accessibility of all pallets.

POWERACK®
PALLET RACKING

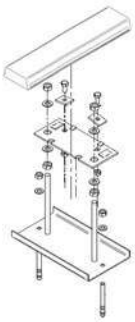
Powerack® is a high-density storage system designed to install pallet racking on to automated Powerack® carriages, allowing opening and closing of the aisles. Conventional static racking requires fixed aisles between racks, causing quite some redundant space. A Powerack® racking system is very efficient and only needs one aisle, creating a much higher warehouse industrial storage capacity. Where compact storage is required while keeping a high degree of accessibility to the stored products, Powerack® racking may be the best solution, especially where storage space is expensive, for example in cold stores.



1/Guiding rail



2/ Running rail



3/ Distance sensor & light barrier



4/ Main Control Cabinet

5/ Personal Detection System

6/ Motor/Drive

7/ Forklift counter

8/ Power supply cables

9/ Powerack® rack

10/ Fix rack

INSTALLATION

- The Powerack® racking system moves on rail tracks installed in the concrete slab. The wheels of the Powerack® bases are running on two guiding rails and a number of flat rails.
- The rails are installed with high precision ensuring a long lasting operation. The Powerack® bases must run parallel so a very flat surface of the tracks is required.
- Rails are delivered on site ready to be installed.
- Clamp usage limits welding on site and eliminates the risk of warpage.
- The system is easily expandable with additional aisles, thanks to its decentralised set-up and easy light cabling. From a software point of view, the controller will recognise new aisles automatically (plug-and-play).



PHOTOELECTRIC SAFETY SYSTEM

The safety of the operator is guaranteed by a photoelectric beam system, mounted on each side of each Powerack® rack and at the outer sides of the complete installation. It complies with the European Machine Safety Directives. When the equipment is put into motion, the safety light bar system is activated.

OPERATION

- The Powerack® racking is operated **manually** (each aisle is opened sequentially), **semi-automatic** (one instruction on the rack controller opens a specific aisle) **or by remote control**. Several aisles can be opened simultaneously for picking purposes.
- Given commands are interrupted by selecting a new one (no need to finish the previous instruction).
- Intelligent lighting, with energy saving interface: only the opened aisle is lighted.
- **Standby mode: the system goes into standby mode after a set time of non-use.**
- **Night parking:** all aisles open allowing air circulation in the whole system.
- Adding P&D-locations may further increase the warehouse efficiency, resulting in a higher return on investment.





ELECTRONICS

- Central Siemens PLC combined with individual controllers per Powerack® base, resulting in less cabling (60%), faster communication and flexible configuration (when expansion is required).
- Close cooperation with Siemens to provide the most user-friendly environment and better capabilities for troubleshooting with the use of a touch display.
- The controller is prepared to interface with a WMS.
- Dedicated remote control, configured for each application.
- Use of a Stow-Bus for communication, only active if sensor or command is activated, not continuously sending data.
- Inverter technology: guarantees smooth operation (start, slow down, stop) and less wear.
- High use of plug-connectors, guarantee a better service quality and faster assembly.

CONSTRUCTION

- Powerack® base with 2 or 4 bearing wheels depending on the load applied with a maximum of 48 tons pallet load on the 4 wheels. Designed so that the driven wheel always has traction.
- Special attention towards fatigue and lifetime of the various components.

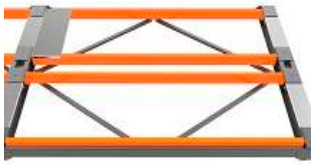
SERVICE

- Remote maintenance access with remote error diagnostics: simplifies servicing and problem solving as the system can be analysed from distance.
- Own service staff

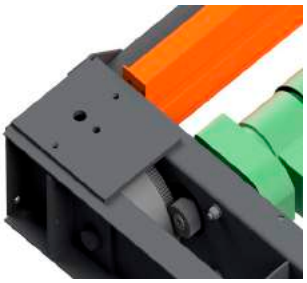


POWERACK® BASE CONSTRUCTION

- Powerack® base with 4 bearing wheels, for better distribution of the load.
- Unique slim design produced in Germany that limits the required top floor thickness.
- Complete construction calculated by means of 3D- FEA modelling. Special attention towards fatigue and lifetime of the various components.



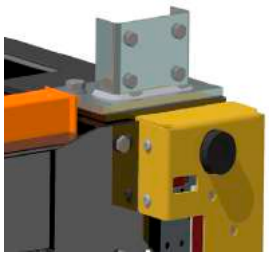
Cover plate



Motor



Connection



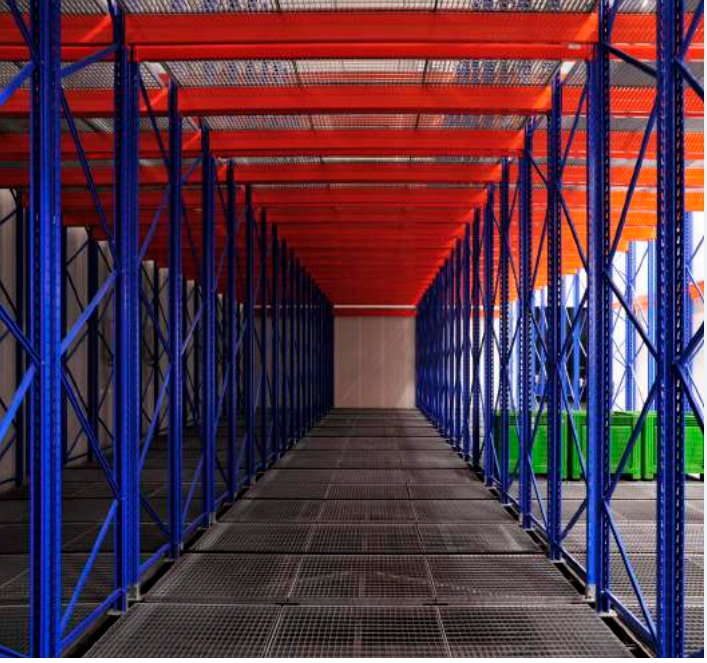
Corner protector with sensors



ADVANTAGES OF THE POWERACK® SYSTEM

- Optimisation of available space:
  High density storage and floor utilisation; 80% compared to 40% in conventional pallet racking:
  - More storage capacity
  - Reduced costs per m^2 (heating, cooling, lighting)
- High degree of occupation (90 %), similar to conventional pallet racking, but higher than other compact storage systems, such as drive in (average of 70%).
- Different pallet sizes can be stored more easily, compared to other high density storage solutions, where high demands are imposed onto the pallet dimensions and quality
- The installation can be configured to optimise space in existing buildings, and can be easily expanded with new blocks.

The Powerack® system is the best logistical solution where a combination of compact storage and individual pallet accessibility is required.



POWERACK®
SAFETY SYSTEM

- When in motion, Safety guards guarantee safe usage.
- Safe for multiple fork lift truck entries: the number of fork lift trucks in one open aisle is counted; the aisle only closes if all trucks have left the aisle.
- Approved personal detection system.
- Safety stop on the racking.
- Safety warning (sound and light).



Remote control from an RF-terminal installed in the lifttruck or from a hand-held device.



Optional link to the WMS system of the customer.



Lighting control system



Other racking systems installed on Powerack® bases, e.g. Cantilever Powerack®

one brand, one company

we rack the world

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