

Steel Storage Racks

Steel storage racks, also known as industrial racking systems or pallet racks, are shelving units used to place, stack or store products in a safe and secure manner. They are found in warehouses, manufacturing plants, distribution centers, and retail stores.

Racking systems can pose serious risk to workers if the system is poorly installed or maintained incorrectly. The following additional factors may increase the risk of injury.

- Overloading the racking system beyond the maximum allowable weight.
- Performing unsafe loading practices.
- Lack of worker training.
- Damage from forklifts or other powered mobile equipment.
- Lack of regular inspections.



Reduce the Risk

The following tips will help reduce the risk of injury and property damage.

- Ensure the racking design and function suit the storage purpose.
- Ensure aisles are clear of debris and wide enough to accommodate powered mobile equipment.
- Install racking according to the manufacturer's specifications. Any deviation outside of the those specifications requires an engineer's certification.
- Conduct and document regular inspections, maintenance and repairs of racking systems.
- Promptly report, repair and/or replace any defects identified.
- Ensure forklifts and powered mobile equipment are operated by competent drivers.

Worker Training

Workers who are provided with the proper training, tools and resources on the job are less likely to get injured.

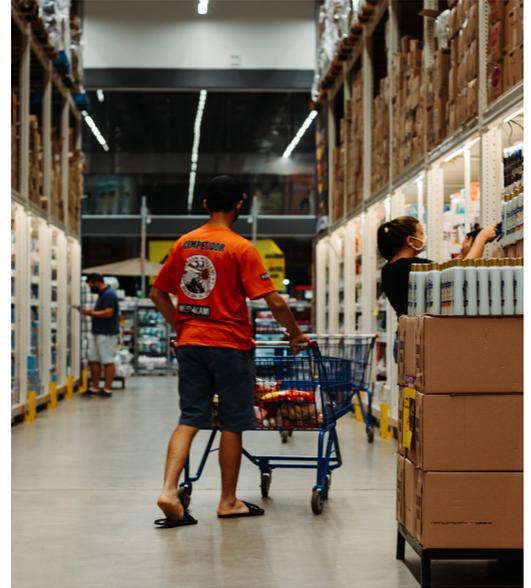
- Provide workers with the safe loading recommendations (rated capacity).
- Train workers to perform regular inspections of the racking system.
- Workers should know how to safely operate power mobile equipment (forklift, pallet trucks) around racking systems.
- Train workers to safely load and unload items onto the racking system.
- Workers should receive any other information specific to the racking system that will protect their health and safety.

Inspections

Inspections are a proactive measure that must be taken to protect workers in the workplace. Racking systems should be inspected regularly by a competent person.

Inspection Checklist:

- Rack is plumb.
- All base plates are secured by anchors as required. Anchor bolts are in good condition.
- Columns are free of damage and corrosion (no dents, cracks, bulges, etc.).
- Horizontal and diagonal bracing is present and has no damage (no dents, cracks, bulges, etc.)
- Beam deflections (or bowing) are within the permissible tolerances of the manufacturer's specifications and show no signs of permanent deflection when unloaded.
- Beams show no signs of deformations, corrosion, cracks in the welds, or other signs of damage.
- Safety pins (locks, safety clips) are in place as per manufacturer's specifications.
- Column guards and row end protectors are in good condition.
- Safety devices (e.g., pallet safety bars, wire mesh decks) are in good condition.
- Products, or loads are stacked in a stable secure manner and within the rate capacity of the rack.
- Rated capacity of the storage rack is posted and easily visible to workers.
- Pallets are the correct size for the rack and are in good condition.



*A **competent person** is a person who has the necessary knowledge, training and experience. This person has knowledge of the provisions of the OHS Act and Regulations that apply to the assigned work, and about potential or actual danger to health and safety.*

The **CSA A344-17 User Guide for Steel Storage Racks** provides additional guidance and recommendations related to steel racks.

