

VAISHNO STORAGE SOLUTION

Mundka Industrial Area, New Delhi | ISO 9001:2015 Certified

ULTIMATE A TO Z WAREHOUSE RACK SAFETY GUIDE

Over 70% of warehouse accidents can be prevented by basic warehouse rack safety inspections and regular maintenance. Following these alphabetical A to Z safety parameters ensures OSHA and EN 15635 compliance across your facility.

A Anchor Bolts & Aisle Clearances

Ensure every column baseplate is firmly anchored to the concrete floor with certified expansion bolts. Maintain unobstructed aisle widths tailored to your forklift turning radius.

B Beam Safety Locks & Bay Load Capacities

Inspect safety lock pins on every connector beam to prevent accidental dislodgement from upward forklift forks. Never exceed rated bay load limits.

C Column Guards & Corner Protectors

Install heavy-duty steel column protectors and end-of-row barrier guards at high-traffic intersections to absorb accidental forklift impacts.

D Deflection Limits & Damage Tolerances

Monitor beam deflection under full load; maximum allowable deflection is L/200 as per EN 15635 standards. Immediately unload bays showing permanent plastic deformation.

E End-of-Aisle Protectors & Emergency Exits

Protect aisle ends with heavy-gauge tubular or structural wrap-around barriers. Ensure racking aisles never block fire hydrants, sprinkler valves, or marked emergency escape routes.

F Forklift Impact Protection & Floor Levelness

Enforce forklift operator speed limits and safe mast heights. Verify concrete floor slab levelness, load-bearing capacity, and absence of foundation settlement cracks.

G Grounding & Guide Rails

Implement floor-mounted guide rails in Very Narrow Aisle (VNA) systems to prevent turret truck collisions. Ensure proper electrical grounding for multi-tier racking structures.

H Hazard Identification & Height-to-Depth Ratio

Conduct routine hazard walks to spot twisted uprights, missing safety pins, and loose baseplates. Maintain a safe height-to-depth aspect ratio not exceeding 6:1 without top aisle cross-ties.

I Inspection Schedules & Impact Damage Logs

Establish daily visual checks by floor supervisors and formal monthly written audits. Maintain a centralized impact damage log for immediate maintenance action.

J Jam Clearance Procedures & Joint Integrity

Train warehouse operators never to climb racking uprights or use makeshift tools to dislodge jammed pallets. Inspect frame splices and joint bolted connections annually.

K Knowledge & Training for Operators

Ensure all material handling equipment (MHE) operators are trained, certified, and aware of pallet placement clearances, load center rules, and reporting protocols.

L Load Signs & Safe Working Load (SWL) Plates

Prominently fix durable Safe Working Load (SWL) notice plaques on every rack end frame showing maximum permissible unit load, beam level capacity, and total bay rating.

M Maintenance Program & Manufacturer Guidelines

Partner with original rack manufacturers for structural repair. Never mix components from different manufacturers or modify beam heights without re-calculating structural load charts.

N Netting & Wire Mesh Backing

Install heavy-duty safety wire mesh or anti-spill netting on single-entry runs and order-picking tunnel walkways to prevent cartons or loose items from falling.

O Overloading Prevention & Operational Clearances

Never place pallets exceeding the rated capacity on upper levels. Maintain a minimum 75 mm to 100 mm vertical and horizontal clearance between pallets and upright frames.

P Pallet Quality & PPE Compliance

Prohibit the use of damaged, cracked, or rotten wooden pallets. Enforce compulsory Personal Protective Equipment (PPE) including hard hats, high-visibility vests, and steel-toe safety boots in racking zones.

Q Qualified & Certified Inspectors

Schedule an annual structural rack audit by a certified rack safety engineer in accordance with EN 15635 European standards and Indian industrial safety codes.

R Repair & Replacement Protocols

Never weld or heat-straighten damaged high-tensile upright columns. Replace compromised components with genuine factory-fabricated parts from Vaishno Storage Solution.

S Shear Pins & Structural Bracing

Verify diagonal and horizontal frame bracing struts are straight, unbent, and securely bolted or welded. Damaged bracing reduces column buckling resistance by up to 50%.

T Tightening & Torque Specifications

Regularly check and re-torque floor anchor bolts and splice connections to manufacturer torque specifications, especially after seasonal temperature shifts.

U Upright Plumbness & Uniform Load Distribution

Ensure racking upright frames are plumb within 1:350 or 1:500 out-of-plumb tolerance limits. Place pallet loads centrally across front and rear load beams.

V Visual Inspection Routines (Green, Amber, Red)

Adopt the standard color-coded damage classification: Green (minor scratches, record & monitor), Amber (moderate damage, repair within 4 weeks), Red (severe deformation, immediately offload and isolate).

W Weight Distribution & Walking Clearances

Place heaviest pallets on the lowest ground or first beam levels to keep the center of gravity low. Keep designated pedestrian walkways completely separated from reach truck aisles.

X X-Bracing & Cross-Aisle Ties Integrity

Inspect top cross-aisle ties, run spacers, and rear vertical X-bracing in high-bay pallet racking systems to ensure overall longitudinal stability.

Y Yearly Professional Safety Audits

Commission comprehensive third-party structural audit reports documenting rack integrity, slab deflection, and bolt torque every 12 months for insurance and factory inspectorate compliance.

Z Zero-Compromise Safety Culture

Foster an open warehouse culture where forklift drivers and pickers report rack bumps and damages immediately without fear of penalty, preventing catastrophic rack collapses.

BOOK A PROFESSIONAL WAREHOUSE RACK SAFETY INSPECTION

Our certified structural engineers provide on-site rack damage assessments, load recalculations, and repair services. Call +91-9871431337 or email info@vaishnorack.com | Factory: Mundka Udyog Nagar, New Delhi 110041