STEEL KING®
BUILT TO DELIVER

STAC-KING® PORTABLE RACK

USER MANUAL



User Manual: Contains Assembly, Installation & Maintenance Information



Correct assembly, installation, use, and maintenance are critical to the safe operation of your portable rack system.

ALL PERSONNEL WHO COME IN CONTACT WITH THE PORTABLE RACK PRODUCT SHOULD READ THIS MANUAL CAREFULLY!

Operators of industrial lift trucks must be trained and certified per OSHA regulation 29 CFR 1910.178.

Keep this manual in a convenient location for future reference, retraining, and orientation of new users of the product.

Guides to Symbols in this User Manual:

DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING: Instructions for assembly are set forth on these pages. Proper assembly is the responsibility of the purchaser and is not covered by any warranty of the seller. Buyer is cautioned not to substitute parts or hardware. Seller disclaims all liability with respect to any substitution of parts or hardware not approved in writing by seller.

The installation detail drawings that follow are intended as basic guides for installation of the standard components. Depending upon the specifications of the system, there may be limitations regarding the use of these standard components and/or a requirement for special installation techniques. Additional information is found in Steel King price books, published technical documents, comprehensive installation drawings, and other materials.

READ THESE INSTRUCTIONS BEFORE ASSEMBLING OR USING YOUR STAC-KING PORTABLE RACK.

To obtain the maximum benefit from any portable rack system, and for the safety of those around the rack, the rack must be properly assembled and maintained. The information in this booklet will assist you in fulfilling your responsibility to provide a safe, properly maintained portable rack system.

Design Considerations Affecting Safety and Function

Stac-King portable racks should be used only by trained personnel, experienced with proper handling and safety.

What is a Stac-King portable rack?

Stac-King racks are steel bases, with or without optional decking materials, that allow handling of loads in a fashion similar to standard wood pallets. However, Stac-King racks have removable steel corner posts, which allow the racked loads to be stacked one on top of the other, without damaging the loads by the weight of the loads above in a stack. **See figure 1.**

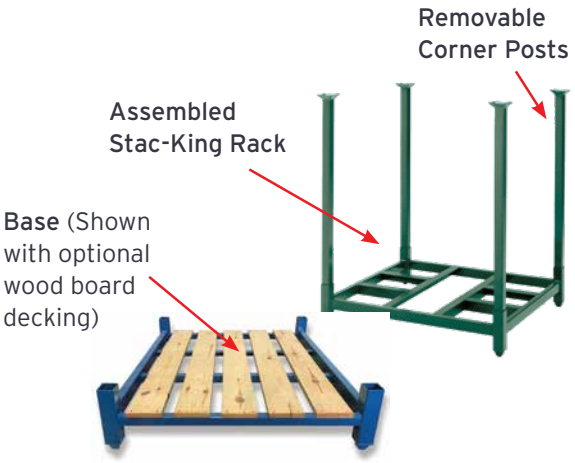


Figure 1: Stac-King Rack Components

Use the correct base construction for the length of the forks on your truck as compared to the size of the base.

If the forks exceed the short dimension of the rack and 2/3 of the long dimension, a "long fork" base will normally work. Otherwise a "short fork" base is the normal choice. **See Figure 2.**

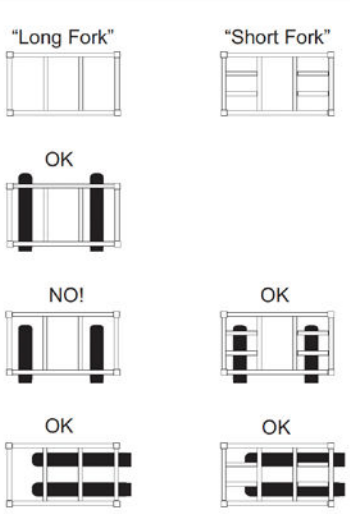


Figure 2: Stac-King Based Versus For Length

Match rack capacity with load weight.

DO NOT place more than 2000# of an evenly distributed load on each "Standard Duty" Stac-King rack. DO NOT place more than 4000# of an evenly distributed load on each "Heavy Duty" Stac-King rack. You do not need to add up all the weight in a stack of racks when determining capacity. The overhead weight is transferred to the floor by the corner posts (columns).

When using tall corner posts, "high corner sockets" or heavier size or gauge corner posts may be required. Contact Steel King engineering on any project where the corner posts must be taller than 42 inches above the deck surface.

Use standard designs only in conjunction with evenly distributed loads without side pressure on columns.

Concentrated loads and loads that subject the columns to side pressure can make the units difficult to stack, or cause them to bend, possibly leading to component failure. Contact Steel King Engineering for design advice on special circumstances. **See Figure 3 on page 4.**



Stac-King Racks in Stacked Configuration

Cautions, Warning, Guidelines for Safe Use

Transport and handle racks one at a time; do not lift or move multiple racks.

Transport racks level or with slight tilt towards the fork lift truck backrest.

Transport racks with rack bases above floor and all obstructions.

If rack legs strike objects, they could bend, making stacking difficult or reducing weight-carrying capacity.

Procedures for stacking portable racks.

- Make sure column posts are completely seated in base sockets.
- Use lift truck to position racks. Make sure all four base plugs of top rack are properly positioned within the column targets of lower rack before removing lift truck.

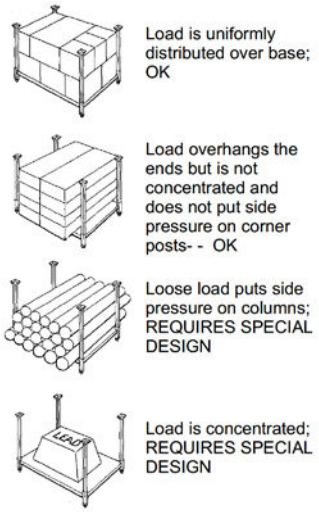


Figure 3: Applications Requiring Custom Design

The overall height of a stacked group of racks must not exceed six times the shortest base dimension.

Stacking the racks any higher than six times the shortest base dimension can cause the stack of racks to be unstable and susceptible to tipping. Falling loads or racks can cause property damage, injury, or death. See figure 4.

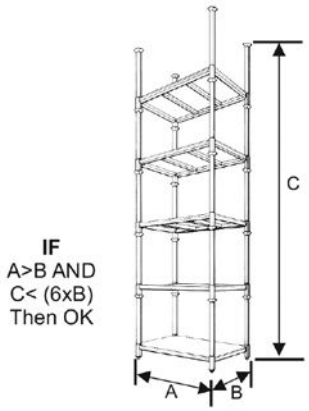


Figure 4: Maximum Stack Height

Stac-King portable racks should only be used on a concrete interior floor surface.

Asphalt surfaces can soften in heat and sunlight. Racks on soft surfaces including asphalt, sand, or gravel may tip over, and the falling racks or their contents may strike people in the adjacent area causing injury or death, or damage to property. High wind loads can cause the same result.

NEVER climb on the racks. Portable racks are not designed to be stepped on or climbed upon. A slip or fall may result in serious injury.

It is your responsibility to communicate this important warning to all who come into the proximity of your portable racks. This communication can include training and appropriate signage or labeling.

Load product onto or off of the Stac-King racks *only* at the floor level and only while unstacked.

Placing loads onto the racks while in a stacked configuration makes the racks more susceptible to tipping. Falling racks or product could cause damage, injury, or death.

Be cautious when intermingling new and existing parts.

Some parts manufactured by other companies are of such similar design that they might fit in a Stac-King rack. However, Steel King has no control over the quality of components designed and manufactured by other firms, therefore any and all warranties and guarantees are made void if non-Steel King parts are used in conjunction with Stac-King racks. Accept only genuine Steel King components.

Install good lighting in every traffic aisle.

Good lighting improves efficiency, reduces risk of accidents, and reduces accidental damage to the Stac-King rack system.

Proper Maintenance and Use

Perform regularly scheduled inspections (at least annually) and maintenance of the Stac-King portable racks.

CHECK FOR:

1. All hardware properly tightened.
2. No dents, kinks, or otherwise damaged components.
3. Worn out or damaged base plugs and column targets.

Replace damaged or missing parts immediately.

In the event of damage, contact Steel King or your Steel King Distributor for replacement parts (damage reduces capacity, creating the potential for product failure and injury).

Train the operators, and maintain the equipment they use in conjunction with the Stac-King portable racks.

Stac-King racks last for many years when used and maintained properly. Stac-King racks can be damaged by careless use of or malfunctioning fork lift trucks.

Do not cut, weld, or in any other way modify any component of your Stac-King portable racks.

Such modifications may decrease the load carrying capability of the component, and the weakened component can jeopardize the integrity of the entire structure. A weakened structure decreases the load-carrying capacity, potentially leading to collapse and injury, death, or damage to property. Any modification of any component, except as performed or authorized in writing by Steel King Industries, Inc. engineering personnel, will make null and void any warranties and guarantees.

Be certain that fork truck operator is protected from overhead loads falling and a crushing injury if the fork truck is allowed to back under a rack section and pin him. If operators would be exposed to such dangers, contact the manufacturer and/or reseller of the fork lift equipment, and demand that protective devices (such as a protective rear post on stand up type trucks) be immediately installed on the equipment to protect the operator.

Establish good housekeeping practices.

Keep aisles clear of litter or obstructions, do not use traffic aisles for storage. Keep aisle surfaces clean and free of ice and condensation, so handling equipment travel is not affected.



Rack and Systems

The ultimate in design and execution, customized for your space and requirements. Built tough, forklift-friendly, and ready to store any inventory.

- Pallet Racks
- Cantilever Racks
- Drive-In / Drive-Through Racks
- Flow Rack / Pushback Racks
- Pick Module Racks
- Specialty Racks
- Portable Racks
- Custom Shipping Racks
- Support Structures / Work Platforms

Safety Products

Steel King's safety products extend the life of your facility and have been setting industry standards in safety, protecting your people, product, and plant.

- Guard Rails
- Safety Gates
- Pallet Load Stops and Supports
- Lift-Out Rails
- Rub Rails

If you have any further questions, contact your local Steel King Representative for customer assistance or contact Steel King Industries directly at (800) 826-0203.

Containers

Steel King manufactures a full line of industrial storage containers for heavy-duty stackable storage, scrap handling, line assembly dispensary, parts distribution, and other uses. We offer essential, industry-standard designs as well as fully-custom containers suited to your storage requirements.

- Transportable Containers
- Bulk Containers
- Collapsible Containers
- Work in Progress (WIP) Containers
- Steel Pallets

Scan to learn about our complete solutions and why our products are BUILT TO LAST.

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