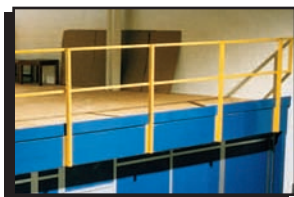




# ClereSpan<sup>®</sup>

**MEZZANINE SYSTEMS**



■ Featuring ClereSpan<sup>®</sup> Free Standing Mezzanine Systems

**STEEL KING<sup>®</sup>**



## Consider the Benefits of Steel King's Free-Standing ClereSpan® Mezzanine

Expensive leased space. Costly land acquisition. Construction. Consolidation. Your organization may be currently facing one of these space issues or planning for future expansion.

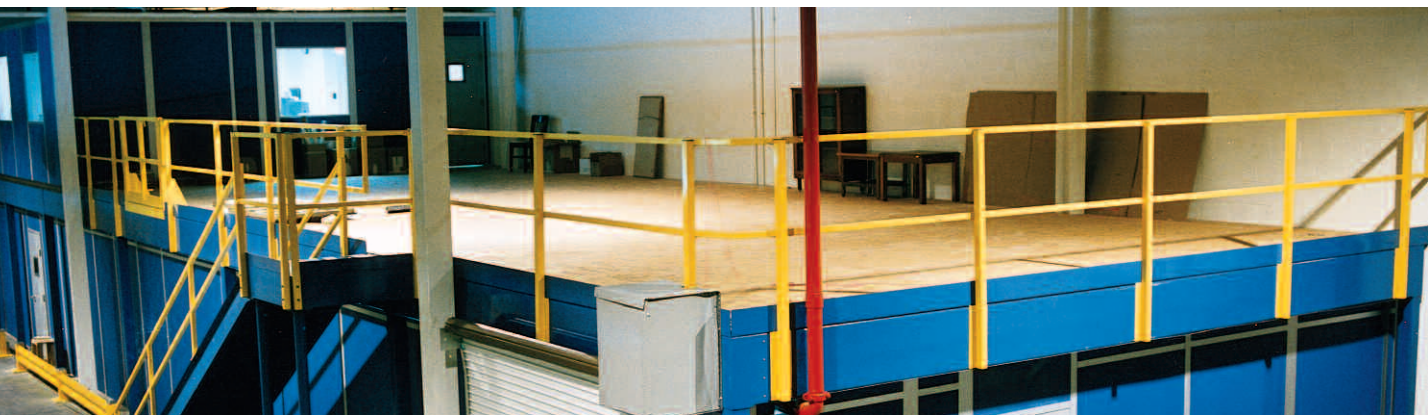
Steel King has the solution: a ClereSpan® Mezzanine System. Every design provides you with the flexibility of a mezzanine system that can be changed or expanded to meet your needs.

Maintain and maximize movement through full utilization of both the floor-level and the platform-level space with no cross bracing between support columns.

- Column spans are available up to 22 feet. Specialty designs can go larger.
- Ease of disassembly and reassembly allows you to adjust the mezzanine to meet your changing needs.
- Increase storage and/or work space without the expense of continuous lease payments or the high cost of construction.
- Custom-designed styles and layouts match your specific area, height, load capacity, use and color requirements.
- High-performance powder-coat paint ensures a durable finish and top-of-the-line appearance.
- Choose from a wide selection of decking, handrail, stair and gate options.



Your exclusive mezzanine design and quality controlled fabrication ensure a quick and easy installation with a minimal amount of labor.





## Structural Integrity and Safety

Built to Last. When you buy a Steel King mezzanine, you can be assured that you will receive a quality mezzanine system built to last. All ClereSpan Mezzanine Systems are engineered for structural integrity and safety. Engineered drawings stipulate framing, location of support columns, deck surface type, and the placement of stairs, swing gates and other specifications.

Designed for Safety. Every Steel King mezzanine conforms to ASTM, AISC and AISI specifications, as well as applicable building codes (SBCCI, BOCA, IBC and UBC) and OSHA requirements. In addition, Steel King mezzanine products are also equipped with the following features for safety.

- Heavy-duty corrugated steel roof decking provides a non-combustible floor acceptable to most fire codes.
- Protective sleeves are permanently mounted within two spring loaded safety locks on optional swing gates.
- Stringers are supported directly over columns.
- Joists are supported by factory-welded connections on the stringers.
- Code-compliant capacity decals serve as visual reminders to all material handling personnel.
- Specially designed handrail posts mount to the outside of the perimeter framing, leaving the area inside the mezzanine free of post and foot plate interference.





## Design Options

**Standard Bearing Design.** This popular and economical design uses TS 5" x 5" columns on 10" x 10" base plates for maximum rigidity and strength.

- Primary framing members mount within nesting channels directly on top of columns. The nesting channels are factory-welded to the columns for a secure connection. These connections create rigid joints, requiring only self-tapping screws to hold the framing member to the nesting channel.
- "U" shaped hangers, factory-welded to the stringer beams, result in extremely strong connection points.
- "C"-shaped framing members provide a tight fit and present a uniform, clean appearance.

The design and manufacture of the Standard Bearing mezzanine system adhere to applicable building codes and OSHA safety requirements.

**Bolted Bearing Design.** The Bolted Bearing Design provides all the benefits of the Standard Bearing design with the addition of 1/2" high-strength framing bolts for use in projects where bolted connections are needed.

- The bolted connections provide greater strength and stiffness for heavier live loads (standard loads are 125 psf) and/or seismic loads.
- Bolted Bearing Designs typically use TS 6" x 6" columns on 12" x 12" base plates for maximum rigidity and strength.

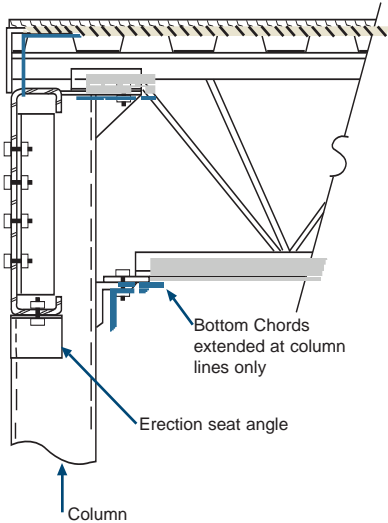
The design and manufacture of the Bolted Bearing mezzanine system adhere to applicable building codes and OSHA safety requirements.

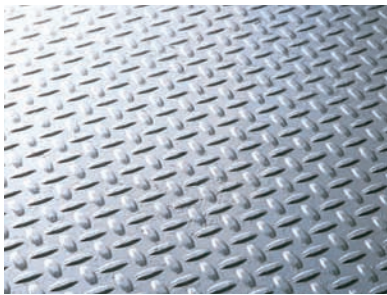
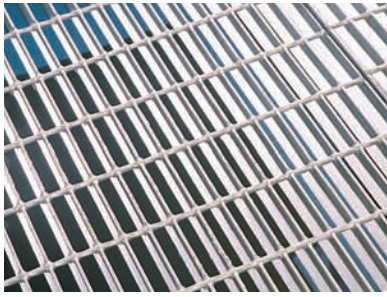


The Bolted Bar Joist Design. Wider column spacing provides additional clear floor space while minimizing column interference with floor operations.

- 6" x 6" or larger columns provide maximum strength and rigidity.
- HVAC duct work, sprinkler pipe, electric conduit and lighting can pass through the structural system, eliminating overhead obstructions and increasing the usable clear height.
- Erection seats incorporated into the column eliminate the need to suspend the beam in the air while field bolting. Installation is quicker, safer and easier.
- Bar joists mounted on top of stringer beams and columns simplify installation. Bottom chords bolt to the columns for additional stability.
- High-strength 1/2" diameter bolts on all joist and girder connections ensure maximum strength.
- "C" section framing construction results in an attractive mezzanine perimeter.

The design and manufacture of the Bolted Bar Joist mezzanine system adhere to applicable building codes and OSHA safety requirements.

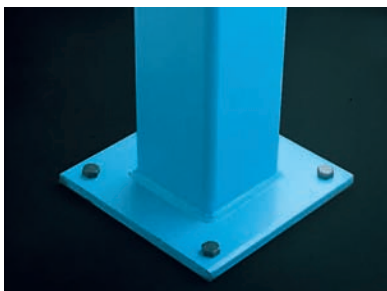




## Engineered Components

### Deck Surfaces

- **Steel Bar Grating.** Eliminate the need for lower-level sprinkler systems with Steel King's 1" x 1/8" steel bar grating. The 82% open area permits light penetration and better airflow.
- **Plywood Floor.** Provide a smooth work surface with a roof deck combined with a plywood floor. The roof deck is 1-1/2" high corrugated B-deck covered with 3/4" tongue-and-groove plywood. Polyethylene coated plywood, resin floors and fire retardant plywood products are also available.
- **Resin Board.** Coated resin board is a more visually appealing flooring option than standard plywood, while also providing superior stain and scratch resistance. Coated resin board may also provide static control for electrically sensitive environments. Coated resin boards feature standard tongue-and-groove installation for smooth transitions between panels. Coated resin boards are generally installed over 1.5" high corrugated roof deck, however thicker resin boards are available which do not require roof deck support.
- **Steel.** A 12-gauge diamond-textured steel surface is an excellent option for surfaces subject to intense cleaning, heavy traffic, or abuse. Commonly used for stair landings, it may also be specified for part or all of the remaining floor area.
- **Other Options.** Poured concrete on B-decking, OSB or particle board on B-decking, plank grating and press-lock grating are other options for deck surfaces. (Not shown.)



### Kickplate and Columns

Present a clean and attractive appearance on all four sides. Steel King's kickplate blends into the closed framing members and hides the edge of the roof deck and the selected floor treatment.

- Specially designed kickplate and columns are manufactured to applicable codes.
- Free-standing mezzanine support columns meet or exceed minimum values of TS 5" x 5" x 1/4" wall cold-formed, structural steel tubing.

## Stairs and Platforms

Install stairs with few adjustments. ClereSpan stair components are shipped with loose handrails, treads, and risers for easier handling. All stair assemblies meet applicable building and OSHA codes.

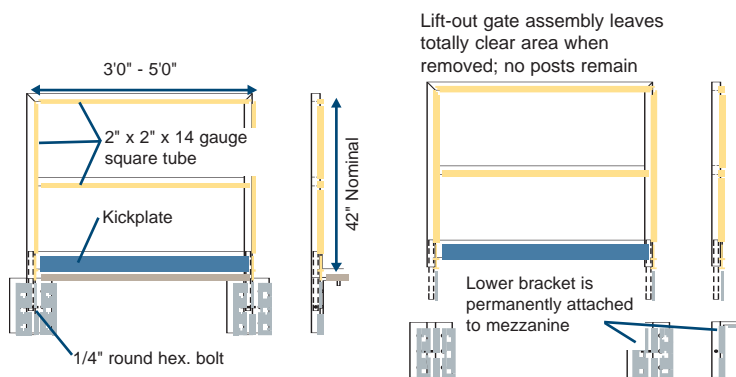
- Stair posts eliminate the need for shelving to support the stair load.
- Increase flexibility by combining four-post platforms with stair units.

## Horizontal Handrail

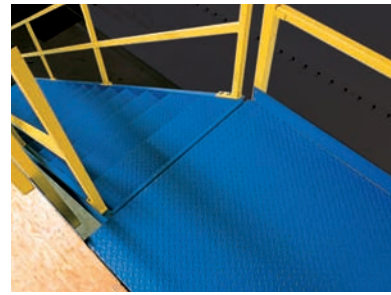
Created for ease of installation, the 1-1/2" x 1-1/2" x 14-gauge square tube standard horizontal handrail and the 2" x 2" x 14-gauge square tube posts simply clip over the frame. An optional round pipe handrail is also available.

## Gates

Access any point on the mezzanine quickly and easily with Steel King's exclusive removable gate. In widths 3' to 5' wide, the gate opens a totally clear space. There are no cumbersome posts to maneuver around when the gate is removed. Gates can be arranged end to end to provide a clear opening when needed.



- Ideal for forklift and palletized loading, 6' and 8' standard swing-in/swing-out gates come equipped with spring loaded dual safety locks. Other widths are also available.
- Excellent for use in tight areas where swing gates are not practical, Steel King's sliding gates (not shown) have 4' to 6'-wide openings.
- All Steel King gates and ladders meet applicable building and OSHA codes.



# Fabrication and Installation

After final approval of your ClereSpan mezzanine design, shop drawings are prepared and your ship date is established. Your mezzanine system is fabricated using Steel King's rigorous quality control standards and finished in your choice of 12 standard colors.

Upon completion of fabrication, all components,

fasteners, engineering and installation drawings, and manuals for your mezzanine are carefully packed and shipped to your site. Steel King or your local distributor will erect your mezzanine system using qualified installers. Installation is easy, quick and proceeds without disrupting other plant activities.

## Architectural Specifications

### ■ General Description

Each mezzanine or elevated work space is designed for a uniform live load in accordance with owner's requirements. All specifications, drawings and calculations are made under the supervision of a registered professional engineer who is a full-time supervisory engineer of the mezzanine manufacturer. Mezzanines will be designed to meet the appropriate national building code (UBC, IBC, BOCA or SBCCI), OSHA or appropriate local building code as specified by buyer. Free-standing mezzanines will not be attached to any existing building walls or columns and will not require cross bracing in any direction.

### ■ Framing Members

Framing members (joists and stringers) are designed in accordance with AISI specifications for the design of cold formed steel structural members. Sixteen gauge or heavier members meet the requirement of ASTM A570-75 Grade E modified to a minimum yield of 50 KSI.

### ■ Deck Surfaces

Each deck is a minimum of 1-1/2" deep, 20 ga. (18 ga. optional) and meets the requirements of ASTM A611-72 Grade C. If grating is used, deck is 19W4 bar grating with 1" x 1/8" bearing bars meeting NAAMM specifications.

### ■ Support Columns

Support columns for a free standing mezzanine meet or exceed minimum values of 5" x 5" x 1/4" cold formed structural steel tubing. Steel King support columns meet ASTM A500 Grade B, FY=46 KSI.

### ■ Stairs and Railing

Stairs are solid tread stairs with no tread openings. Stairs and railing meet code requirements for rise, tread, width and openings.

### ■ Finish

All components are painted with a high-performance powder-coat finish. There are twelve standard colors to choose from.



### ■ Installation

Installations are performed by experienced mezzanine installers.

### ■ Experience Level

Mezzanine manufacturer will have a minimum of five years experience in the production of mezzanine systems. At owner's request, mezzanine manufacturer will provide owner with location and access to similar type projects.



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