



INDUSTRIAL NETTING SYSTEMS



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WHO WE ARE

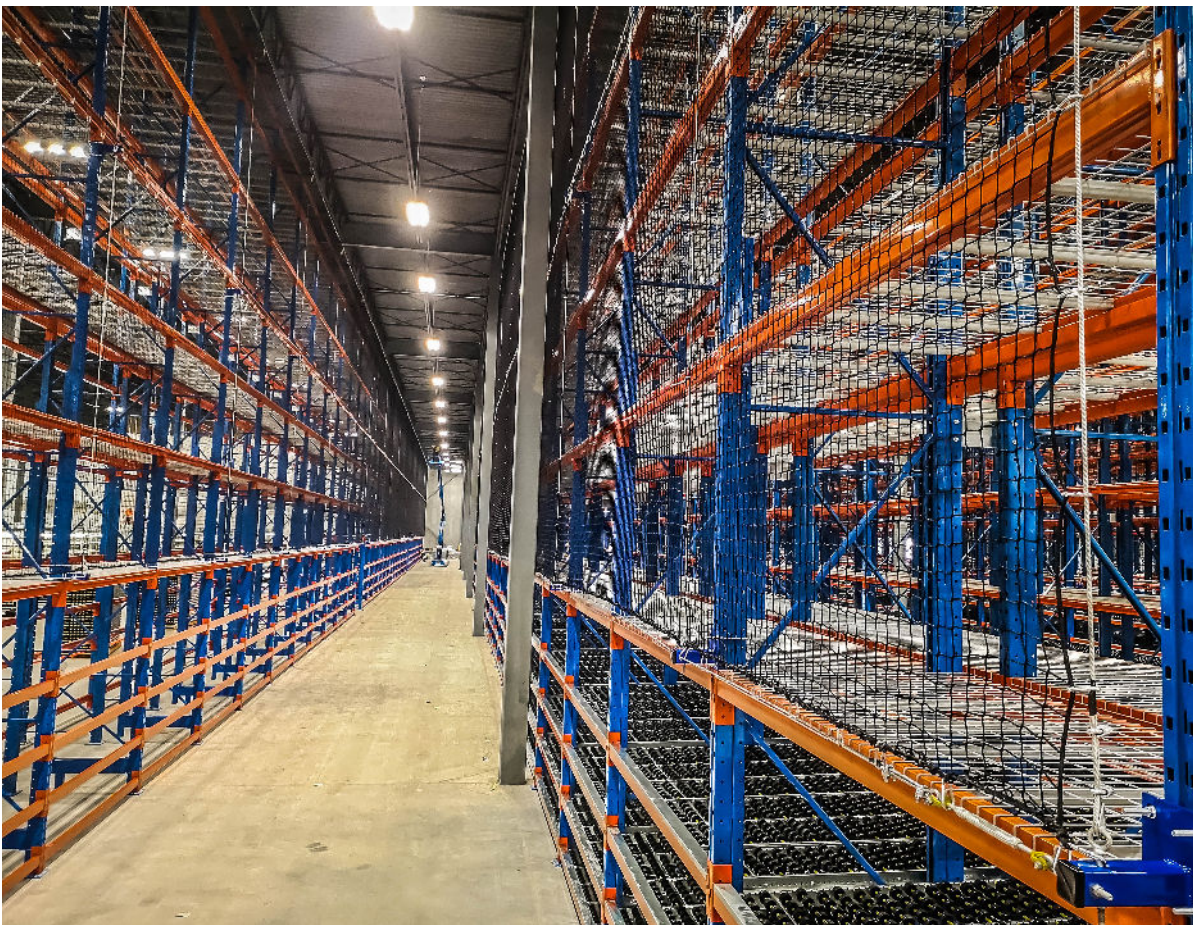
FACTORY SUPPLY

Proudly part of the Liftsafe Group of Companies, Factory Supply, provides top of the line standard and custom industrial material handling, access products, and fall protection systems. With a 20 year track record, we are the most reliable industry experts and work with your team to address your specific needs.





RACKGUARD LINE OF PRODUCTS

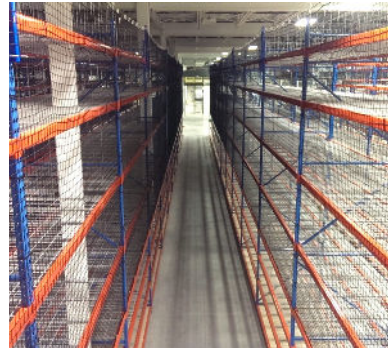
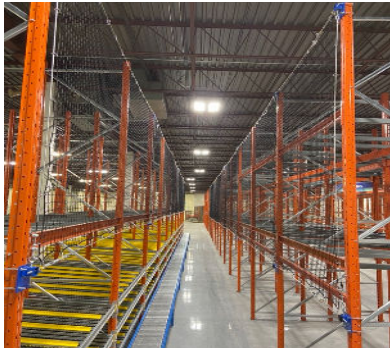


RACKGUARD

Factory Supply offers a complete line of Industrial Rack Netting as a cost-effective, engineered solution designed to make warehouses safer for employees and visitors.

Our rack netting is installed on the back of storage racking to protect aisle ways, work areas, people and machinery from products that may become dislodged and fall to the ground below.

Our system has been designed and tested specifically for industrial racking applications. Each custom design utilizes engineered offset and extension brackets, custom sized netting panels, and load-rated cable systems, to adapt to any racking configuration.





WHAT ARE THE BENEFITS?

PROTECTING PEOPLE AND PRODUCTS

QUALITY



Engineered netting systems are the end user's assurance of quality and dependability

REDUCE LIABILITY



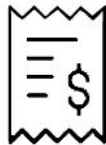
Reduced insurance premiums and risk of costly fines

PROTECTION



Protects employees and visitors from injury or death

REDUCE COSTS



Reduce product loss and associated costs

CUSTOM ENGINEERING



All netting, brackets, cables and hardware are custom engineered and tested

PROPER INSTALLATION



Get it done right the first time and avoid ineffective equipment



WHAT SETS OUR SYSTEM APART?



CUSTOMIZED FROM START TO FINISH

- Custom product designed to fit each specific job requirements (no cookie cutter approach)
- Offset hardware designed specifically for every project to allow for pallet overhang beyond racks
- Extension hardware available to allow protection for items stored on the top load beam
- Systems installed by highly trained and experienced techs



SOFT CATCH VS. RIGID NETTING

- Our team utilizes a soft catch netting system
- Soft catch system disperses energy from the impact point to guard frame, cable, and attachment points
- Unlike rigid barriers, nets are allowed to flex at impact, dissipating energy and exerting less force to the rack system itself
- Fallen product is less likely to be damaged
- Will catch objects of all shapes, sizes and weights
- Cost effective solution



STAY SAFE

SAFETY STATISTICS

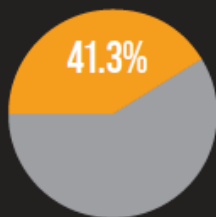
falling and struck by objects



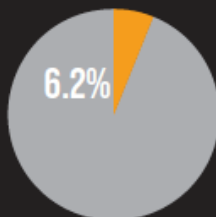
IN 2018 THERE WERE
786 FATALITIES
FROM BEING STRUCK BY A FALLING OBJECT OR EQUIPMENT



**325 WERE CAUSED BY
A FALLING OBJECT**



REPRESENTS **41.3%**
OF ALL **STRUCK BY**
FATALITIES



REPRESENTS **6.2%**
OF ALL **WORKPLACE**
FATALITIES

BEING STRUCK BY AN OBJECT IS THE
3RD MOST
DISABLING INJURY
IN THE WORKPLACE



137,650 INJURIES FROM BEING
STRUCK BY FALLING OBJECTS OR EQUIPMENT

+ **16,070 INJURIES**
FROM FALLS OFF OF TRUCKS

+ **22,020 CONSTRUCTION FALL INJURIES**

+ **1750 FANS INJURED** EVERY YEAR
BY FOUL BALLS IN MLB BALLPARKS

× **\$41,000** PER MEDICALLY
CONSULTED INJURY

\$7,277,090,000 DIRECT COSTS
IN **2018** ALONE

UNDERSTAND THE SAFETY REGULATIONS

OSHA 1970 SECTION 5

To assure safe and healthy working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthy working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes.

ANSI A10.11

All nets supplied are manufactured and tested in accordance with Industry Standards, and all such netting has been tested to strict ANSI standards as laid out in ANSI A10.11. This includes the complete system with all hardware installed onto a racking system and tests made to simulate a real-case product fall.

NFPA 701 FIRE PROTECTION

Meets and exceeds NFPA 701 Fire Protection Standards. This test measures the flammability of a fabric when it is exposed to specific sources of ignition.

ACCEPTED BY THE FDA

Non-organic nylon nets, coated to close pores. Won't rot, harbor spores or maintain moisture.

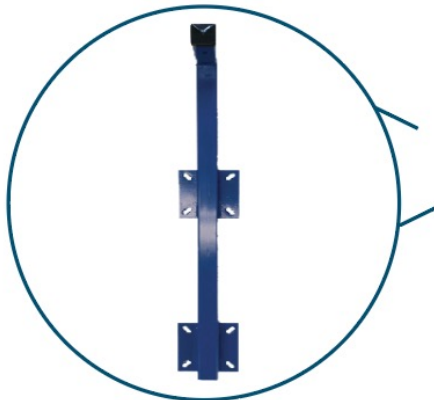


CREATE A SAFE WORK ENVIRONMENT

- Untested and/or self-fabricated remedies are risky. You are responsible for any accidents relating to the failure of hardware and installation
- Incorrect installation could result in a system that does not provide the protection you require
- Keep in mind - Does your installation company have proper insurance coverage relating to the installation of a netting safety system?



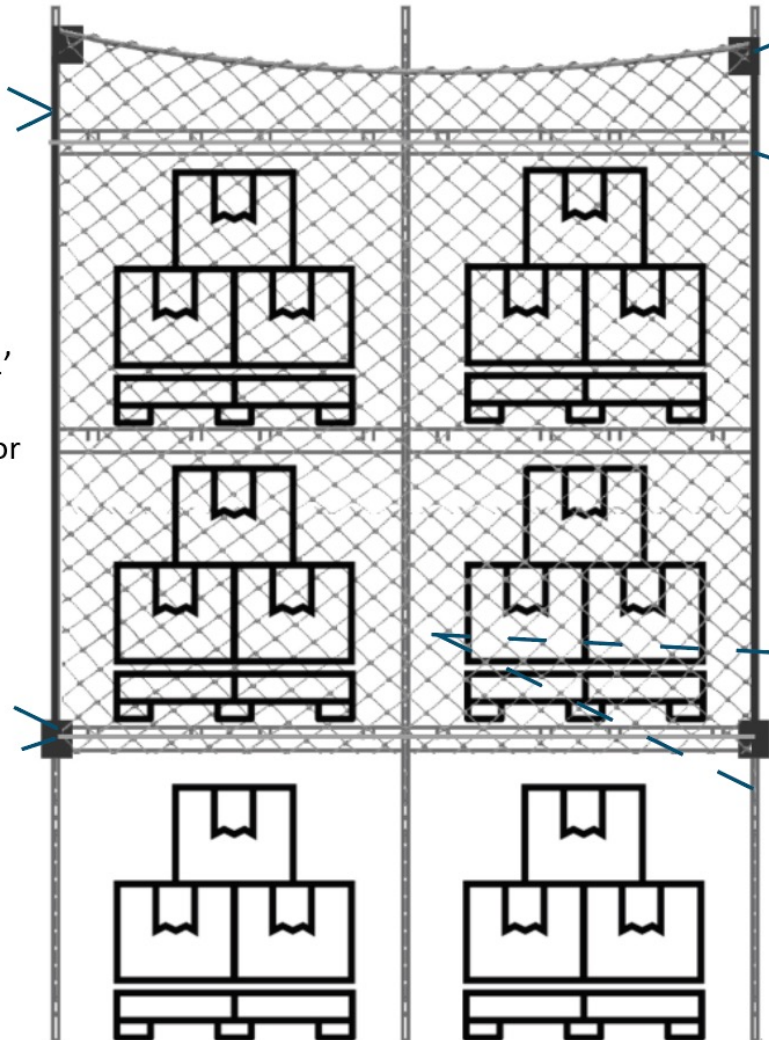
RACK NETTING SYSTEM OPTIONS



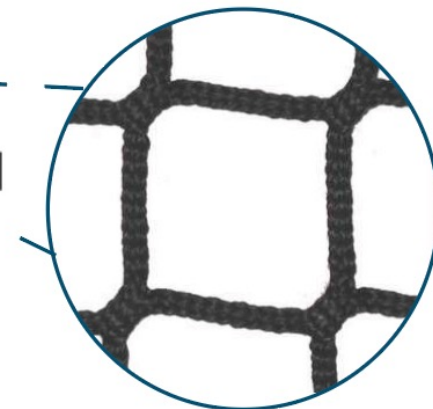
Frame Extensions: range from 1' up to 4'
HD Extensions: available for 5' or 6' applications



Offset Brackets:
Standard size - 4" & 6" offset
Flushmount style - 1" offset
Custom sizes available.



Standard Rigging:
1/4 Galvanized Cable
Wire Rope Clips
Thimbles
Turnbuckles
Eyebolts
Safety Snap Hooks



Standard Netting:
2" square knotless mesh made from
Nylon 6 yarn. Rated at 2500 ft-lbs as
per ANSI A10.11.



RACKGUARD NETTING

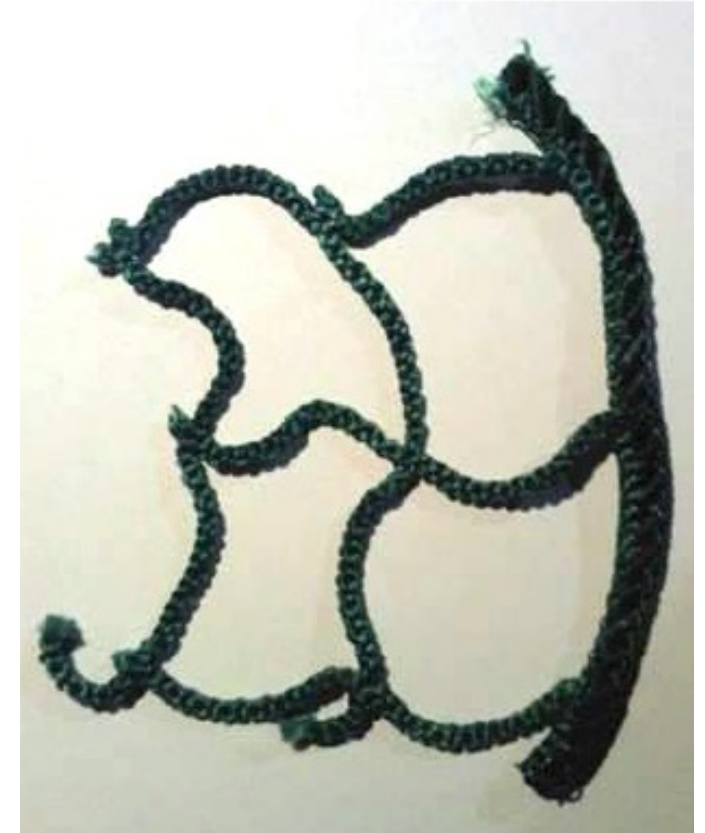


NETTING PANELS

- Standard net panels are designed to cover two bays at a time
- Utilize a soft catch system
- Multiple netting options
 - 2500 lbs net - 2" square, nylon, industrial safety netting
 - 3000 lbs net - 2" square, nylon, industrial safety netting
 - 6000 lbs net - 2-½" square, HTPP, fall arrest netting
- Fire retardant in accordance with NFPA701
- Custom net sizes based on each project
- Knotless netting, sewn rope border
- U.V. protection
- Color: black (custom available for large orders)

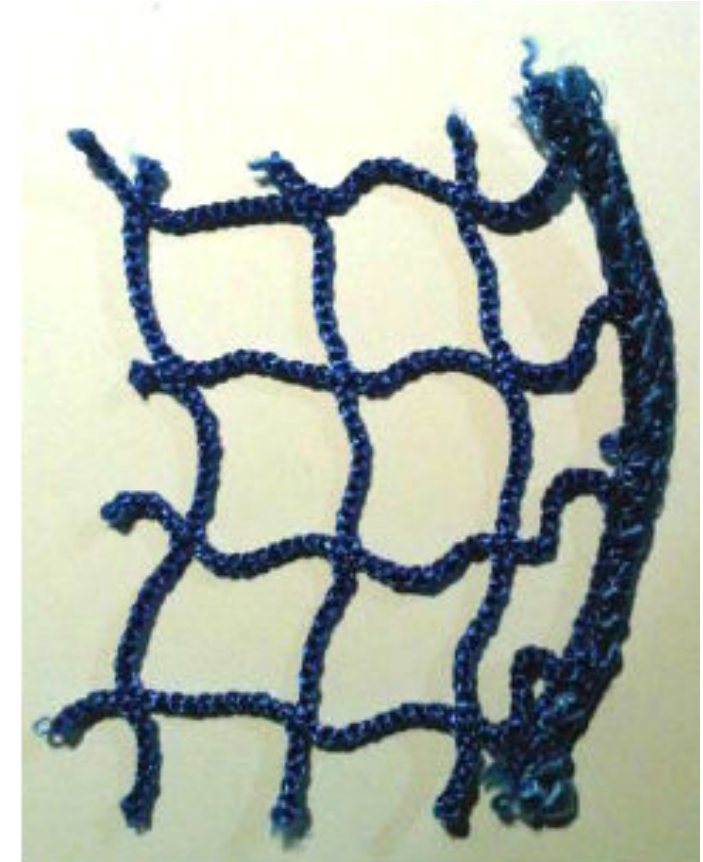
INDUSTRIAL NETTING TECHNICAL SPECIFICATION SHEET

- **Mesh Model #:** 2" square (210/120)
- **Type:** industrial safety netting
- **Application:** back-of-rack pallet guard, HD conveyor
- **Construction:** single needle bar raschel knotless, sewn rope border
- **Mesh Style:** 4-1/8" stretch mesh (2" square)
- **Mesh Twine:** RN-1201, 100% nylon 6 high tenacity
- **Twine Strength:** tensile strength = 325 lbs
- **Border Rope:** #120 nylon twine, 0.170" diameter, 1200 lbs tensile strength
- **Border Thread:** 840 denier polyester, machine wrap
- **Joining Twine:** nylon
- **Approx. Material Weight:** 0.035 lbs/square foot
- **Load Ratings:** 2500 lbs
- **Color:** Black
- **Additional Notes:**
 - UV stabilized yarn
 - Flame retardant in accordance with NFPA701



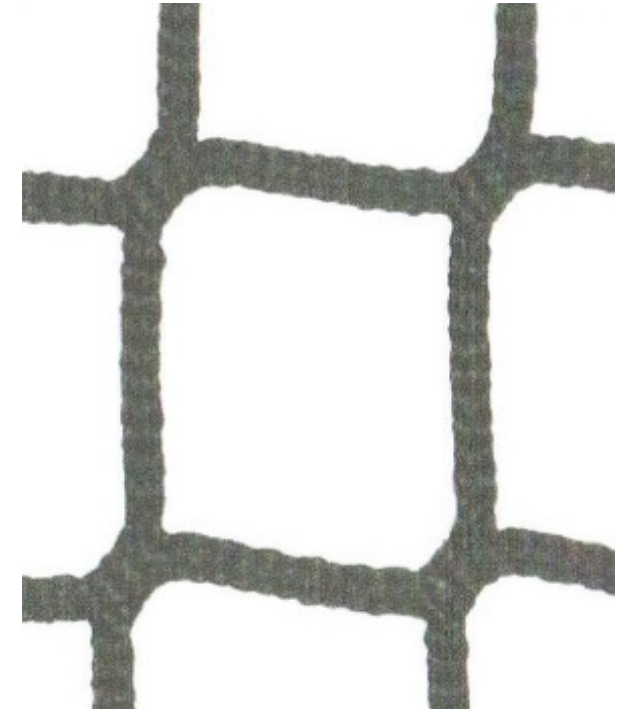
INDUSTRIAL NETTING TECHNICAL SPECIFICATION SHEET

- **Mesh Model #:** 1" square (210/80)
- **Type:** industrial safety netting
- **Application:** conveyor
- **Construction:** single needle bar raschel knotless, sewn rope border
- **Mesh Style:** cut on square
- **Mesh Size:** 2-3/8" stretch mesh (1-1/8" square)
- **Mesh Twine:** RN-1755, 100% nylon 6
- **Twine Strength:** tensile strength = 235 lbs
- **Border Rope:** #120 nylon twine, 0.170" diameter, 1200 lbs tensile strength
- **Border Thread:** 840 denier polyester, machine wrap
- **Joining Twine:** nylon
- **Approx. Material Weight:** 0.032 lbs/square foot
- **Load Ratings:** 1000 lbs
- **Color:** Black
- **Additional Notes:**
 - UV stabilized yarn
 - Flame retardant in accordance with NFPA701



INDUSTRIAL NETTING TECHNICAL SPECIFICATION SHEET

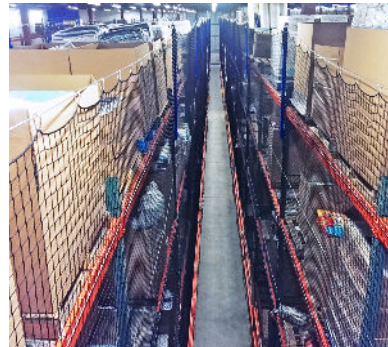
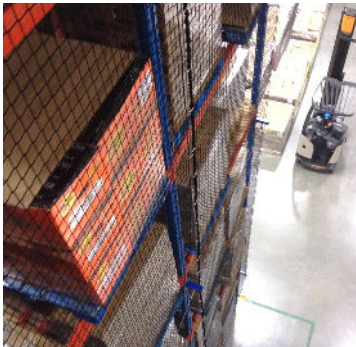
- **Mesh Model #:** 2" square (DPP41186)
- **Type:** industrial safety netting
- **Application:** same level personal FP, oil pits, HD industrial guarding
- **Construction:** single needle bar raschel knotless, sewn rope border or web border
- **Mesh Style:** cut on square
- **Mesh Size:** 4" stretch mesh (2" square)
- **Mesh Twine:** HTPP
- **Twine Strength:** tensile strength = 2525 lbs
- **Approx. Material Weight:** 0.06 lbs/square foot
- **Load Ratings:** 6000 lbs
- **Color:** Black
- **Additional Notes:**
 - UV stabilized yarn
 - Flame retardant in accordance with NFPA701



TESTING STANDARDS

ANSI A10.11

- All nets supplied by Factory Supply are manufactured and tested in accordance with Industry Standards, and all such netting has been tested to strict ANSI standards as laid out in ANSI A10.11.
- Nets are tested until single-strand breaks, not until the entire net ruptures
- Actual weight is then cut in half, providing the net (and the user) with a safety factor of two.
- Ensures the end-user with the best safety solution available.





BRACKETS



ENGINEERED OFFSET & FLUSHMOUNT BRACKETS

- Steel bracket with positioning holes at pre-determined positions to allow for flush-mount or offset net positioning
- Custom spacer bar between first two frames to resist twisting of frames inward when cables tightened (for longer offset applications only)
- Standard offsets have an allowance for 4" & 6" settings, but custom sizes are available in sizes ranging from 2" up to 12"
- Flush mount brackets available to ensure the netting panel is as close to the rack as possible when needed



ENGINEERED RACK FRAME EXTENSION BRACKET

Use as much warehouse space as possible by storing products higher on racks.

Engineered frame extensions are available to increase the height of the frame and allow netting protection for products on the upper load beam. Our frame extensions come in 1, 2, 3 and 4 ft variations.

- Steel Hollow Structural Section (HSS) Extension with built-in offset (length specific to every application)
- Mounted to racking in the same manner that the offset brackets are (U-Bolt design)
- Includes all mounting hardware



ENGINEERED SPECIFICATIONS



Standard offset bracket



Extension bracket

- All structural steel sections shall conform to OSHA
- All steel plates and bars shall conform to OSHA
- All welding shall conform to OSHA
- All welds to be smooth and free of burrs
- Capacity rating is based on minimum 2:1 load factor to ultimate strength
- Capacity rating only applies to units supplied by Factory Supply
- Units must be installed using Factory Supply supplied hardware in accordance with installation manual



HARDWARE

MOUNTING HARDWARE



Snap Hook

Spring Loaded Snap Hooks allow for easy application and removal of netting panels.

Snap hooks typically spaced every 12" around the perimeter of the nets.



Galvanized Cable

1/4" Galvanized Cable (sometimes utilizing 3/8" cable for larger capacity projects)

System requires horizontal cables. Vertical cables are run where net panels join together to provide a support structure.



U-Bolts

Includes U-Bolt mounting hardware for attachment to racking. (up to 4" structural rack)

7" U-Bolts available for double post applications.



Eyebolts
Turnbuckles
Wire Rope Clips

3/8" x 4-1/2" eyebolts

RATED HARDWARE VS. NON-RATED HARDWARE



Rated

Forged Shoulder Nut Eyebolt

3/8" x 4-1/2"

WLL = 1,200 lbs

Safety factor: 5:1

VS.



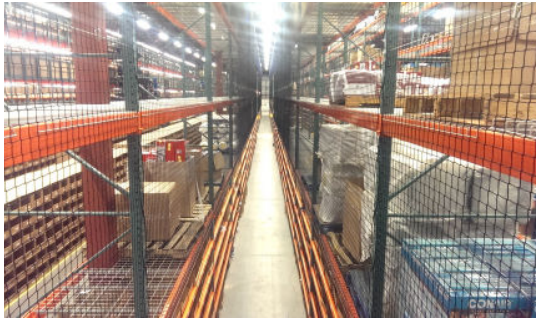
Unrated

Turn-Back Eyebolt

3/8" x 4"

WLL = ????

Eyebolts made by bending a rod or wire into a loop are only suitable for light-duty applications, as heavy loads can cause the eye to open. For high loads, eyebolts with forged or welded loops should be chosen, as they can withstand loads up to the tensile strength of the material of which they are made.





HOW TO QUOTE RACKGUARD

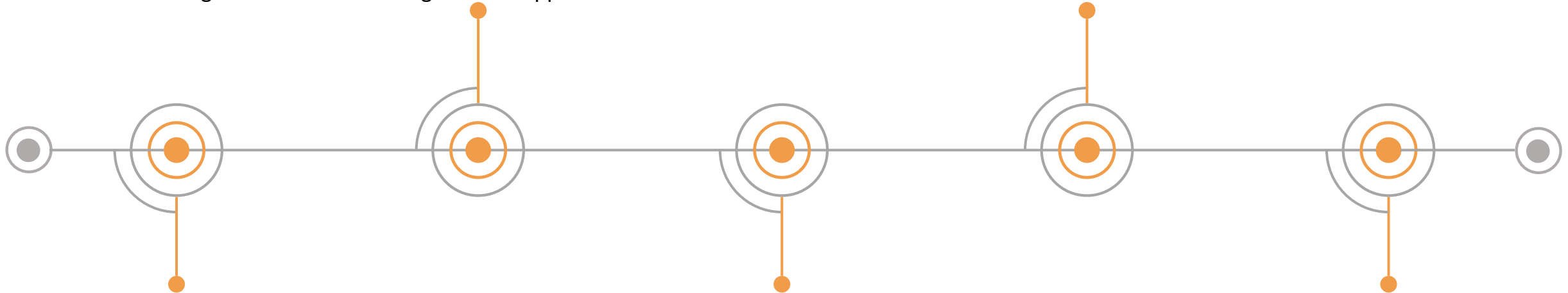
THE QUOTING PROCESS

Take measurements

Measure the inside clear width of each bay, the height of uprights/frames, the column size and depth, the starting height of nets and the height of the upper load beam.

Netting and bracket options

Consider the max pallet load for netting options and equipment. Consider pallet overhang or flush mount (to decide how much of an offset will be needed). Are there double posts anywhere in the run?



Start the calculations

Evaluate the number of bays in each run (if multiple runs) plus the number of runs (if multiple).

Frame extension options

Are there pallets on upper load beams? Does the product extend above the frame height? If so, how much does it extend above the frame and are frame extensions required?

Other considerations

Can a scissor lift get into position behind racking for use during install? Any other circumstances, obstruction, a hindrance that may come up during the install.

RACK NETTING QUOTE QUESTIONNAIRE

Number of runs?	
Number of bays in run?	
Inside clear width?	
Height of upright?	
Column size (W X D)?	
Height of upper load beam?	
Pallet on upper load beam?	(YES) (NO)
If YES what is the height of the pallet load? Will determine need for rack frame extensions.	
Maximum pallet weight?	
Elevation that you wish the mesh to start at?	
Is there pallet overhang, or flush mount?	
Double posts at bottom?	
Are there any tunnels/encumbrances in the run?	
Would you like an installation price?	
For installation, can customer provide a scissor lift?	(YES) (NO)



RELATED PRODUCTS



HORIZONTAL NETTING FOR RACKING APPLICATIONS

- Rack guard netting can be used in a horizontal application on gravity flow racking, push back, drive-in, or racking where there is a risk of small items falling through the racking
- Netting is installed horizontally to protect workers on levels below. Horizontal cables are run the entire length of the racking system, and nets are attached to these cables using safety snap hooks
- Netting sizes are determined by the weight of pallet loads, factoring in fall distance
- Ratings of nets are based on ft-lbs, which is determined by the product's weight falling multiplied by the fall distance
 - i.e.. 200 lb box falling five (5) feet generates 1,000 ft-lbs of force

Our custom horizontal
netting brackets mount
inside the racking system
to hang our standard
2500 lbs pallet net.



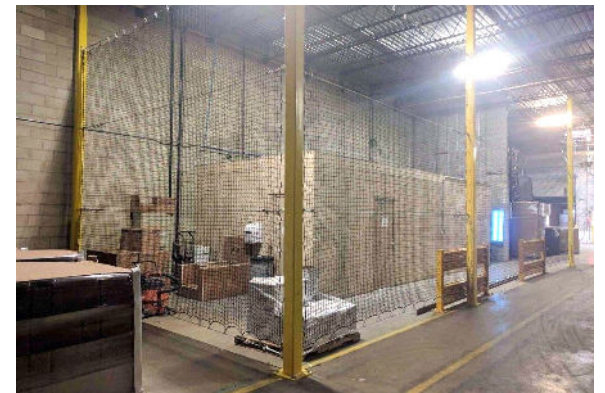


BARRIER NETS

It has become more and more essential to utilize all available space in warehouses. When racking is not appropriate, the stacking of product is often used. Engineered barrier netting systems protect stacked product storage.

Barrier systems can be installed onto existing building structures (must be analyzed first by a Professional Engineer and approved before installation), or engineered floor to ceiling columns can be installed in areas where there are no such columns available.

A combination of horizontal rows of galvanized cable and industrial rated netting can be installed next to these stacks to prevent the product from tipping and falling into pedestrian areas, high traffic areas, or work stations.





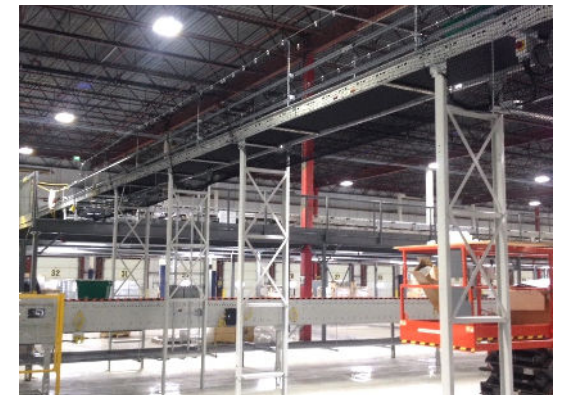
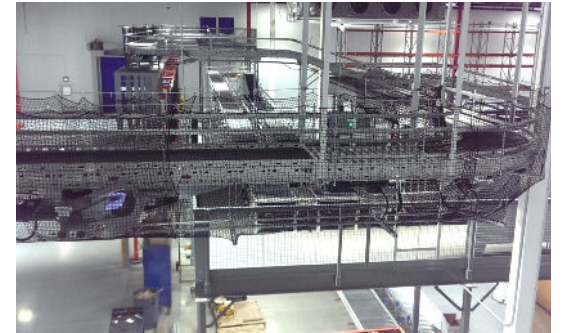
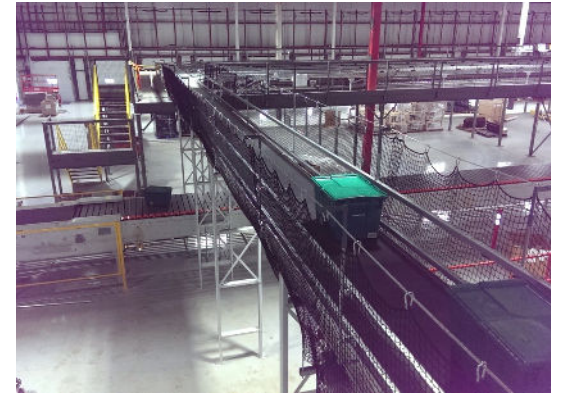
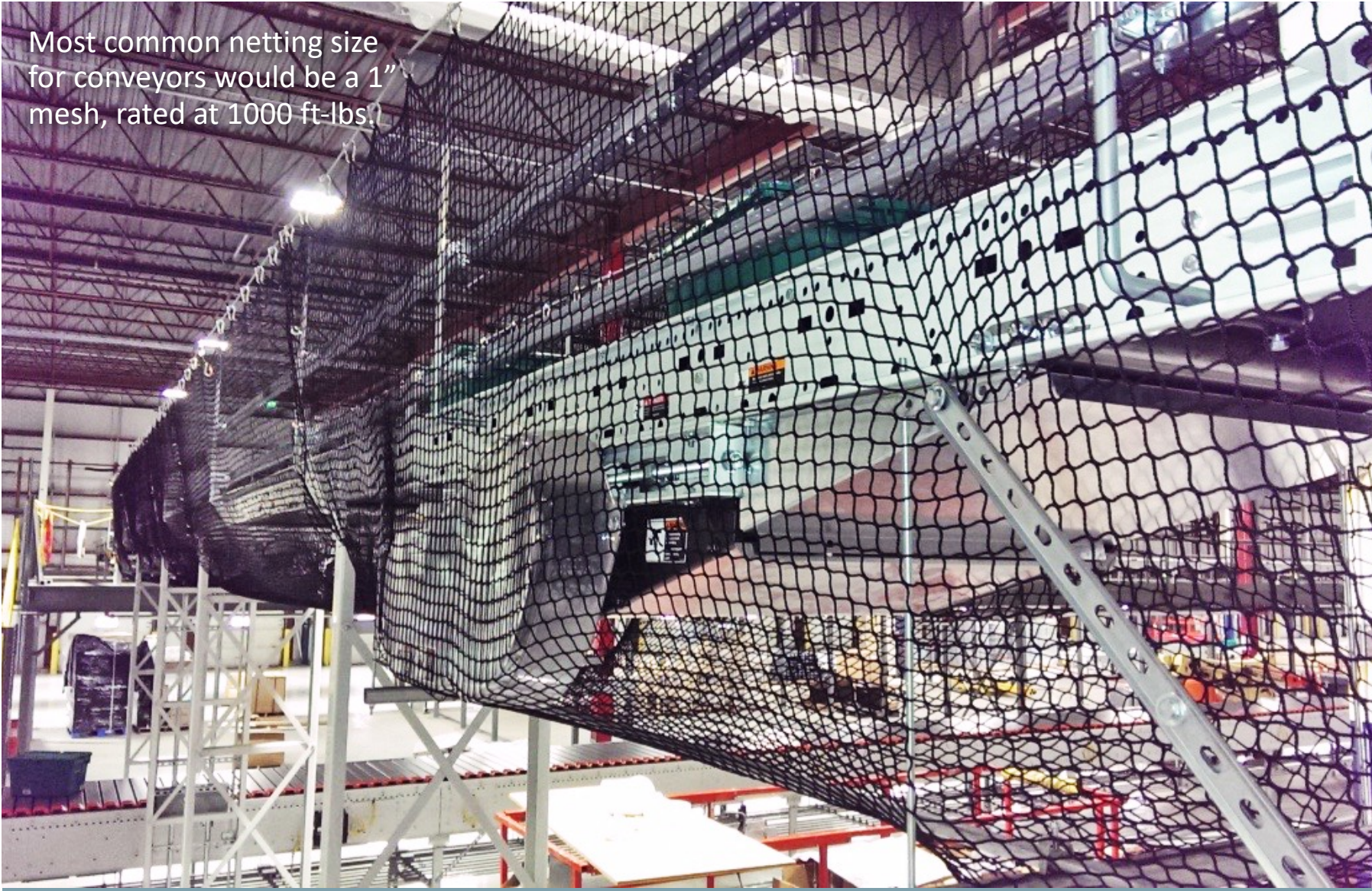
OVERHEAD CONVEYOR NETTING

We offer custom conveyor guard netting systems tailored to your facility's operational needs. Conveyor systems increase the risk of product falling to the ground below in the event of a product jam, causing boxes that have nowhere to go to push over the side of the conveyor.

Netting systems installed up the sides and underneath these conveyors provide protection from such jams and catch products until they can be retrieved and put back into the system.

- Nets are rated based on product size (weight or physical size)
- Nets will also catch parts that may come loose from the conveyor itself
- Customizations available for every project

Most common netting size for conveyors would be a 1" mesh, rated at 1000 ft-lbs.





WHAT'S INCLUDED WITH YOUR PARTNERSHIP?

DEDICATED TEAM

We have a dedicated team of sales reps and a large, highly trained dealer network across North America who are here to assist you with your netting solutions.

Simply email or call – we're ready to answer your questions!

- **Phone:** [+1\(727\) 347-4820](tel:+17273474820) or [+1\(888\) 242-3045](tel:+18882423045)
- **Email:** sales@factorysupply.com

ACCESS TO MARKETING MATERIALS & SERVICES

Branded materials are available at your request and include:

- Brochures
- Catalogues
- Power Points
- Price lists
- Specification sheets

Our online Dealer Portal provides easy access to all product information, literature and training needed.

PRODUCT TRAINING & SUPPORT

Your account representative will provide detailed training on our product lines and services. Learn about:

- Our quoting process
- Product details
- Manufacturing process

For Customer Support please do not hesitate to reach out to our team at the contact information below.

- **Phone:** +1(727) 347-4820 or +1(888) 242-3045
- **Email:** sales@factorysupply.com



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