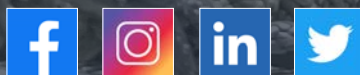




## ULTRA CROSS® KNOTLESS NETTING

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Engineered Safety. Uncompromised Visibility.



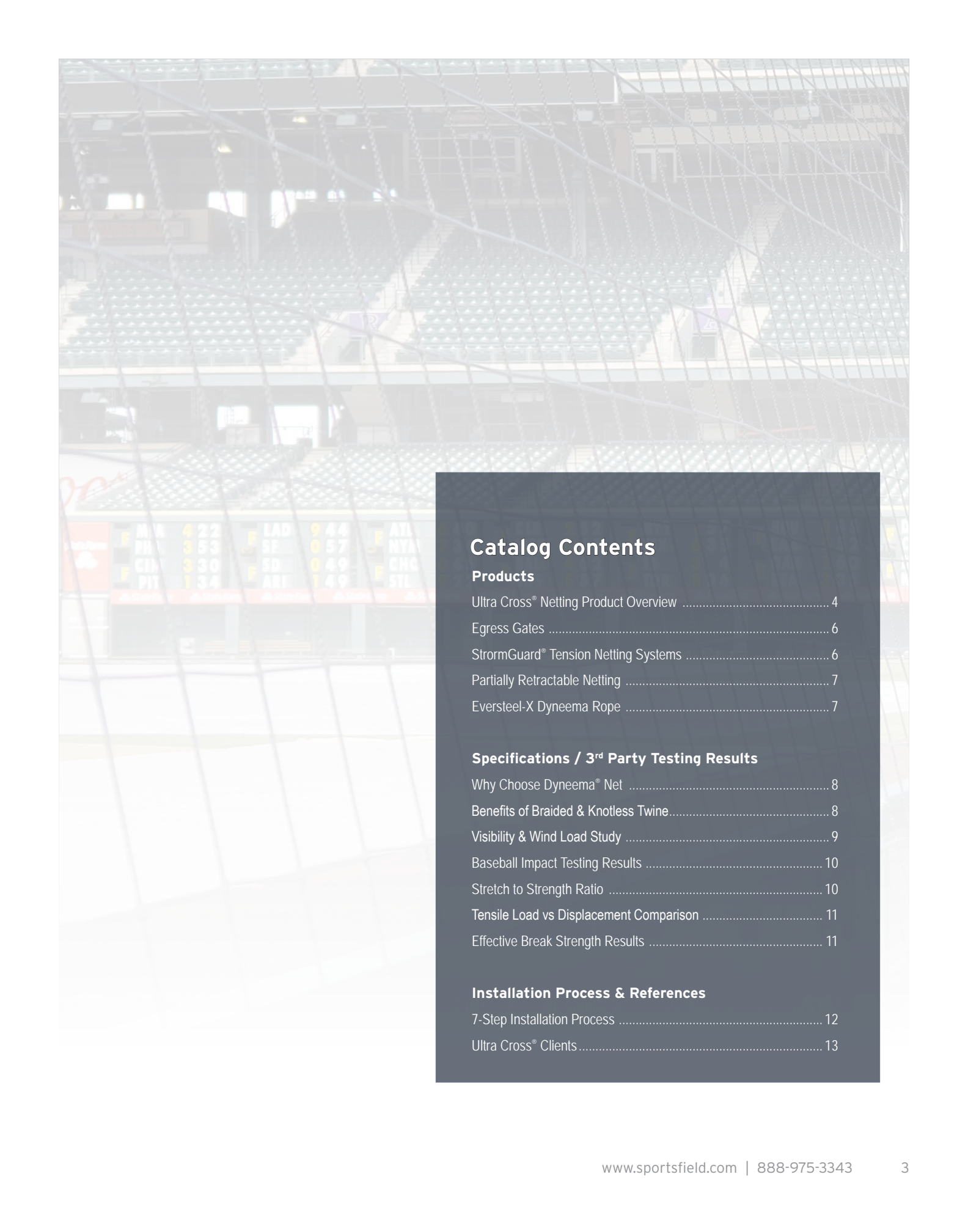


## Welcome to Sportsfield Specialties, Inc.

Since 1998, Sportsfield Specialties, Inc. has been the innovative leader in the manufacture and sale of athletic field equipment for high school, college, and professional levels of competition. With over 30 patents awarded for their game-changing designs, Sportsfield is integral to moving the sports construction and venue renovation industries forward. Our commitment to client-centered service, strategic partnerships, and building world-class equipment gives customers the highest level of confidence that their facility will look great and function efficiently using Sportsfield equipment

Sportsfield's motto is Excellence from Design to Installation and from first contact, our sales team is ready to help you select the best solutions for your unique facility. At Sportsfield, our in-house engineers are integral to finding custom solutions that address regional elements such as wind load and soil conditions. We don't stop there! We're also committed to certified excellence and work with 3rd party testing agencies to ensure products like our Ultra Cross® Knotless Baseball Netting Systems and Zone® Outdoor Wall Pads function at the top of their game.





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## Ultra Cross® Knotless Netting

### Product Overview

- Sportsfield is the exclusive provider of Ultra Cross® baseball netting
- Manufactured with UHMWPE Dyneema®, considered "The World's Strongest Fiber"
- Knotless, low-profile design gives spectators industry-leading 95% see-through visibility
- Specifically designed to deliver superior strength and performance over conventional netting
- Braided intersection eliminates 30-60% strength loss experienced by knotted synthetic fibers
- Four-strand braided twine is proven to be stronger than two-strand twisted alternatives
- Improved dimensional stability relative to knotted netting that will tighten and distort over time
- Lightweight with 95% open-area results in less wind load and stress on the system
- Performance characteristics are backed by 3rd party testing and certification



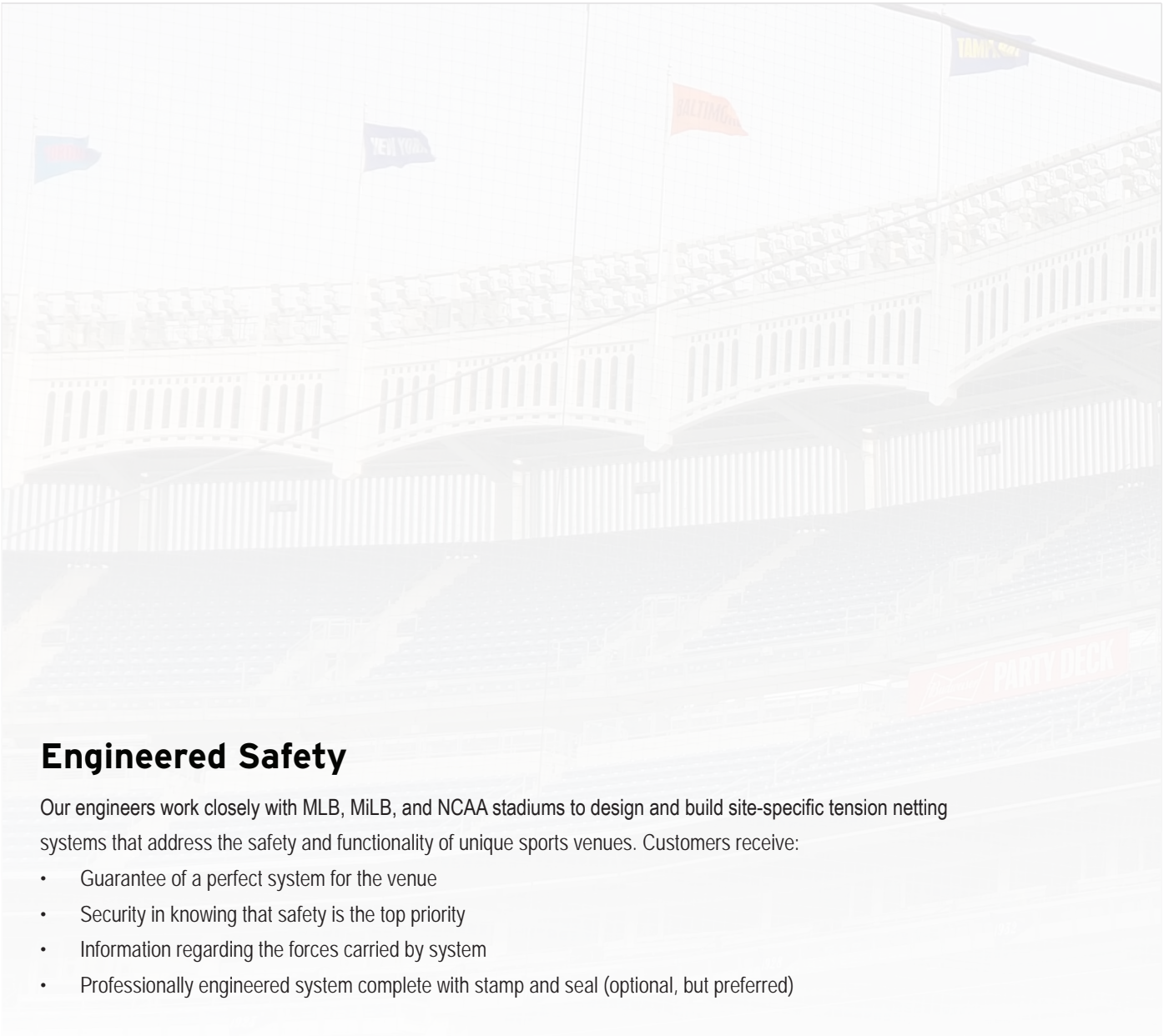
### Ultra Cross® Field Green Dyneema® Netting

Field Green Ultra Cross® was developed in conjunction with MLB to provide optimal visibility to spectators. The "camouflage" coating color, over durable black Dyneema® twine, was developed to fade into the ballpark backdrop of dirt, turf, and stadium seating. This premium netting provides the same engineered safety and uncompromised visibility as 1.2mm uncoated Black Ultra Cross® while offering the most advanced solutions to achieve spectator satisfaction.



### Ultra Cross® Black Dyneema® Netting

Our original Ultra Cross® Black continues to provide safety and excellent visibility to spectators. The black Dyneema® fiber provides exceptional resistance to UV damage and the braided and knotless design offers the strongest configuration available. Ultra Cross® has been, and continues to be, the industry leader in engineered safety and uncompromised visibility.



## Engineered Safety

Our engineers work closely with MLB, MiLB, and NCAA stadiums to design and build site-specific tension netting systems that address the safety and functionality of unique sports venues. Customers receive:

- Guarantee of a perfect system for the venue
- Security in knowing that safety is the top priority
- Information regarding the forces carried by system
- Professionally engineered system complete with stamp and seal (optional, but preferred)

## Uncompromised Visibility



1.2mm Ultra Cross<sup>®</sup> is the **first net to offer industry leading 95% visibility for spectators**. The knotless and multi-strand braided design allows for a **lower profile twine that has the strongest configuration available**—This means seeing less net without compromising safety!

## Ultra Cross® Featured Products



### Ultra Cross® Egress Gate System

#### Product Overview

- Provides a retractable Ultra Cross® entryway barrier between the stands and the field
- **New!** Improved design uses a low-profile top bar and minimal side cable supports, which improves sight lines for spectators
- Top bar suspended system offers distinct visibility advantages over traditionally framed netting egress structures
- Egress gate can be easily raised between innings and lowered to provide outstanding protection and industry leading 95% see-through visibility
- U.S. Patent #10,226,682, Issued March 12, 2019



### New! StormGuard® Tension Netting System

#### Product Overview

- Industry leading provider of protective netting solutions
- **New!** Improved safety technology designed to release net under high winds without dropping to the ground and prevents extreme weather failures of main structural elements
- Shear pins are site-specific based on capacity of existing structure and/or design wind speed directed by owner
- Black or green, 1-3/4" square 1.2mm Dyneema® netting material
- Lightweight Ultra Cross® netting barrier means decreased load; less infrastructure necessary to hold the system; and less cost!
- Available with stamped drawings and calculations by a licensed professional engineer
- U.S. patent pending





## Partially Retractable Netting

### Product Overview

- Popular feature at professional and other high-level ballparks
- Allows end user to clip netting into a raised position for fan interaction before and after games, between innings, and for emergency access in areas where a netting barrier exists
- 3'-4' gap created when netting is in raised position. In closed position, netting is clipped to the bottom cable and a weighted rope edge prevents ball pass-through
- Operable using 1-2 Stadium Personnel in a few short minutes

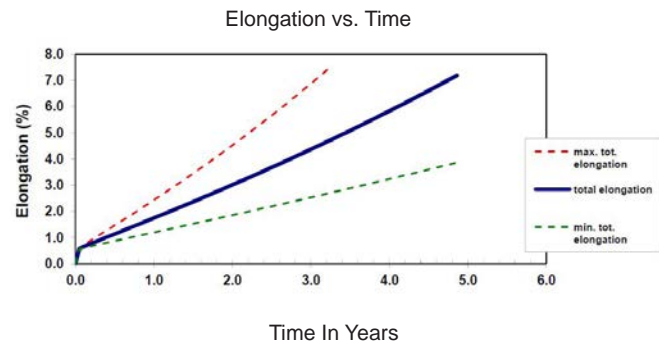
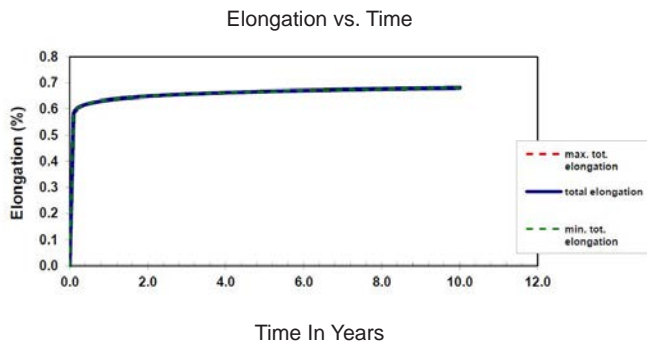


## Eversteel-X Dyneema Rope

### Product Overview

- Eversteel-X is constructed from lightweight, super strong, and durable Dyneema® DM-20 fiber
- Unlike other synthetic ropes, Eversteel-X has very little stretch / creep due to construction with cutting edge Dyneema® DM-20 fiber
- Dyneema®'s properties allow engineers to minimize pole sizes, foundation structure, and cable sizes, which equates to easier installation, less visual obstruction and lower cost
- Trends to increase netting extensions at baseball stadiums has resulted in Dyneema® rope becoming more common and often necessary
- Sportsfield Specialties is the industry leader in working with synthetic ropes and uses specialized products, personnel, and installation practices to ensure minimal sag over time

### EVERSTEEL-X VS. INDUSTRY STANDARD SK78 DYNEEMA ROPE STRETCH/CREEP COMPARISON



## 3 Reasons to Choose Dyneema® Fiber Netting



**High strength**



**Lightweight**



**More Durable**

Dyneema® fiber is ideal for manufacturing easy to manage netting that has exceptional see-through visibility and protection that lasts. Ultra Cross® Dyneema® baseball netting is at the top of its class!

### The Braided & Knotless Netting Advantage



Industry Alternative #18 Twine



Ultra Cross® Braided Twine

<b>Twisted &amp; Knotted Netting</b>	<b>Ultra Cross® Braided &amp; Knotless Netting</b>
Stiff and difficult to work with	Very flexible and easier to handle
Stretches significantly	Minimal stretching
Tendency to kink due to abrasion	Extremely resistant to abrasion
Risk of unraveling	Tightens and strengthens with tension
Uneven strain in fibers rapidly decreases strength	Strongest rope configuration available



# Ultra Cross® Visibility & Wind Load Study

Ultra Cross® possesses the highest open-area percentage, providing industry-leading 95% see-through visibility and the lowest wind loads available in the market. **Our results are certified** -- Just take a look at the comparative analysis conducted by Delta Engineers, Architects, and Land Surveyors.

#12 Knotted Dyneema®



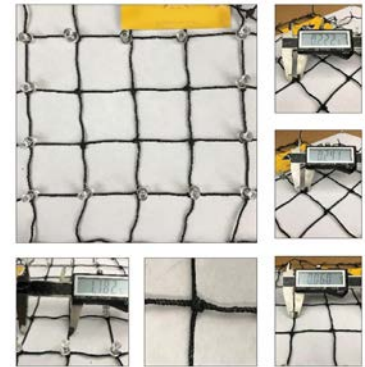
Joint Area (in<sup>2</sup>)    0.206 x 0.265 = 0.546  
 Overall Area (in<sup>2</sup>)    (1.791 - 0.063)<sup>2</sup> = 2.986  
 Open Area    [1.791 - (0.063 x 2)]<sup>2</sup> - 0.0546 = 2.718

Pro-9 Knotted Dyneema®



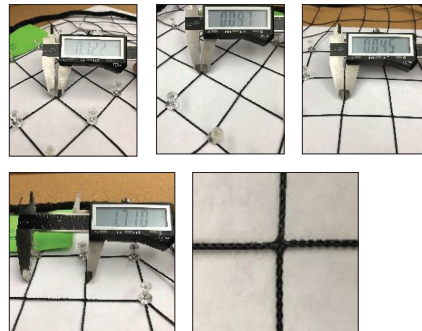
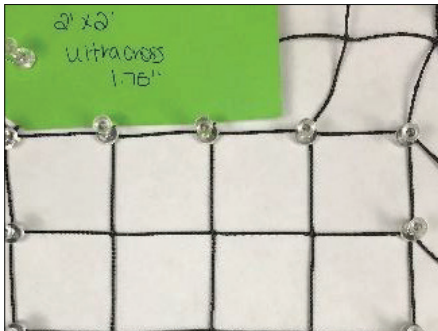
Joint Area (in<sup>2</sup>)    0.115 x 0.243 = 0.0279  
 Overall Area (in<sup>2</sup>)    (1.753 - 0.044)<sup>2</sup> = 2.921  
 Open Area (in<sup>2</sup>)    [1.753 - (0.044 x 2)]<sup>2</sup> - 0.02794 = 2.744

#18 Knotted Dyneema®



Joint Area (in<sup>2</sup>)    0.222 x 0.241 = 0.0535  
 Overall Area (in<sup>2</sup>)    (1.7282 - 0.060)<sup>2</sup> = 2.965  
 Open Area (in<sup>2</sup>)    [1.782 - (0.060 x 2)]<sup>2</sup> - 0.535 = 2.708

## Ultra Cross® Knotless Dyneema®



Joint Area (in<sup>2</sup>)    (0.122 x 0.097) - 0.045<sup>2</sup> = 0.0098  
 Overall Area (in<sup>2</sup>)    (\*1.749 - 0.045)<sup>2</sup> = 2.903  
 Open Area (in<sup>2</sup>)    [\*1.749 - (0.045 x 2)]<sup>2</sup> - 0.0098 = 2.742



**DELTA**



\*1.749" = Avg across entire netting sample

	Strand Thickness (In)	Joint Area (In <sup>2</sup> )	Overall Area (In <sup>2</sup> )	Open Area (In <sup>2</sup> )	% Open Area
#18 Knotted	.060	0.05350	2.965	2.708	91.3%
Pro-9 Knotted	.044	0.02794	2.921	2.744	93.9%
#12 Knotted Dyneema	0.045	0.0546	2.986	2.718	91.0%
Ultra Cross® Knotless	<b>.045</b>	<b>0.0098</b>	<b>2.900</b>	<b>2.739</b>	<b>94.5%</b>

(all measured values, photographs do not show all values for calculations)



**Ultra Cross® Baseball Impact Test**

In March of 2021, Sportsfield Specialties contracted Innovative Test Solutions (ITS) of Schenectady, NY to conduct impact testing on our Ultra Cross® Knotless Netting. Our goal was to see just how many powerful hits our industry-leading product could handle!

To simulate a field installation, a scaled down netting system model was constructed to replicate a full-scale system. This cable suspended system consisted of four constraint cables, located at each edge of a 10'x10' 1.2 mm knotless Ultra Cross® Dyneema® netting panel. The net was then lashed to the cables with a combination of zip ties and braided rope. Once the system was in place, a series of standard baseballs was fired at the net from a dramatic 10' distance using a high-powered pitching machine with ball speeds averaging at 100mph. Here are the results:

Test Date	Distance (ft)	Ball Impacts	Avg Speed (mph)	Comments
3/15/2021	10	4795	100MPH	Net Failed after 4795 ball impacts. Ball passed through main target point breaking two netting strands. The cable were re-tightened, as needed, during testing.

Eng/Tech: *Jacob Fisher*  
Jacob Fisher

Data Check: *Lou Fiorini*  
Lou Fiorini

Quality Manager: *Sam Acevedo*  
Sam Acevedo

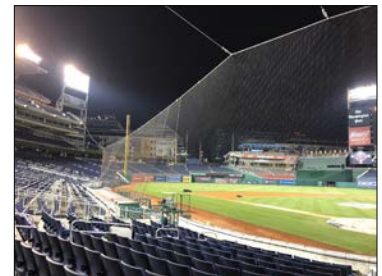
**ULTRA CROSS® NETTING TOOK NEARLY**

**5000 HITS!**

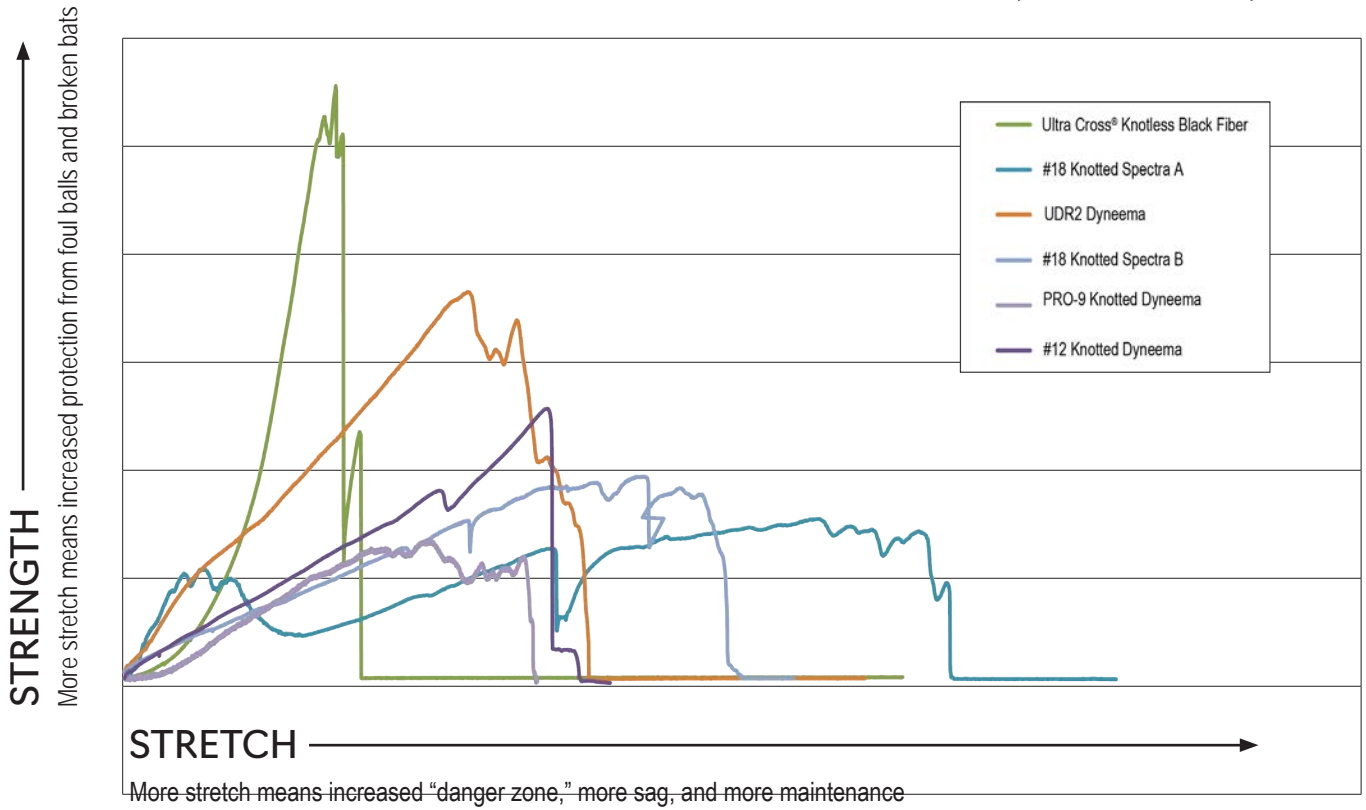
**Stretch to Strength Ratio (in/lb)**

Ultra Cross® has the lowest stretch to strength ratio (in/lb) available, as determined by independent studies

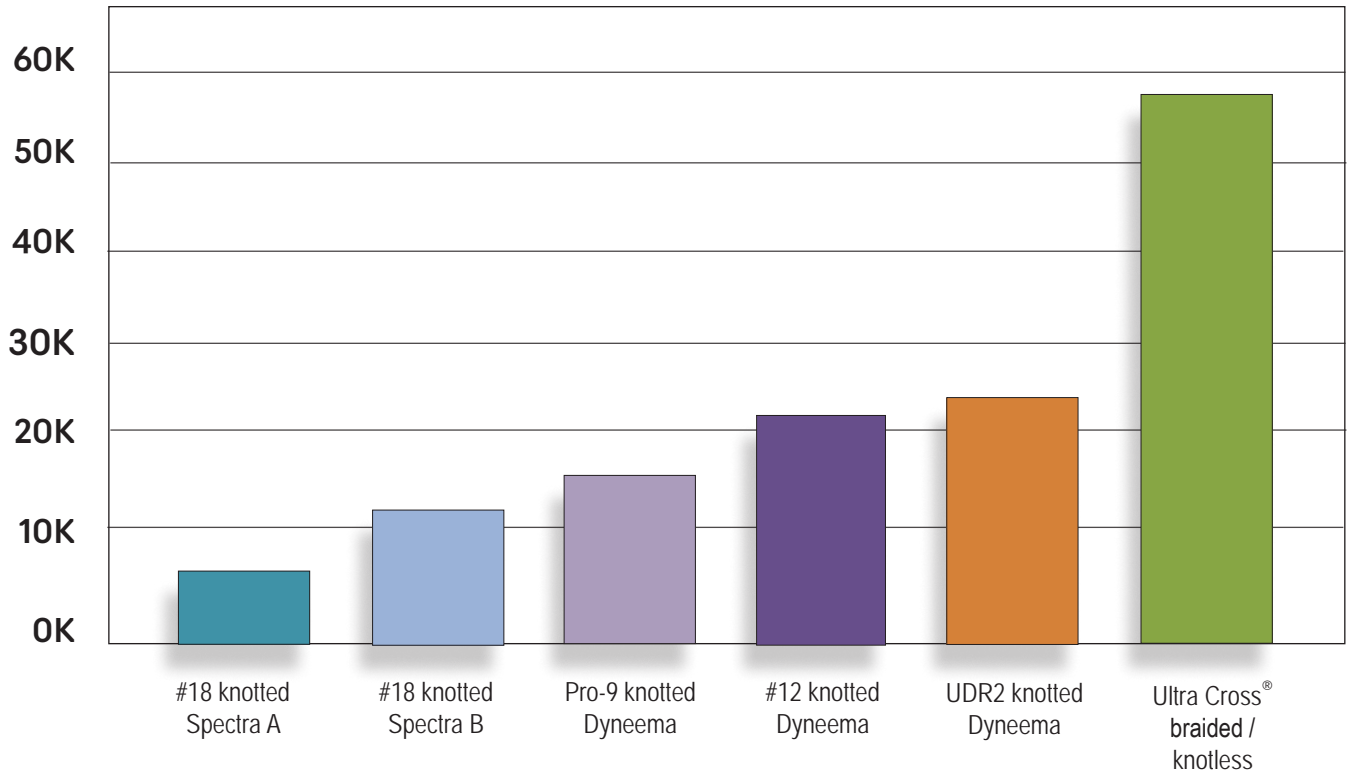
Netting	Stretch to Strength Ratio
Ultra Cross® braided / knotless	.01
UDR2	.03
#12 knotted Dyneema	.05
Pro-9 Dyneema	.08
#18 Spectra B	.09
#18 Spectra A	.15



## Ultra Cross® Tensile Load vs. Displacement Comparison



## Effective Break Strength (PSI)





## Our Process from Design to Installation

Step 1: Site visit and/or consultation with Sportsfield Specialties representative to discuss conceptual designs and provide pricing

Step 2: Receipt of approval from stadium representatives

Step 3: Stamped drawing from engineering firm

- Determine load bearing on existing cabling and/or connection points
- Provide design loads for new stadium-specific connections
- Specify what hardware is required
- Confirm optimal system layout and unearth safety concerns

Step 4: Procure required materials. Lead times typically range from 3-8 weeks

Step 5: Sportsfield-led netting system installation

- 1-2 week process
- Various lifts and other equipment required
- 4-5 highly specialized Sportsfield Specialties Installers

Step 6: Final walk-through with GM / Owner / Athletic Director

- Prior to completion installer will have system approved by appropriate personnel

Step 7: Owner responsible for annual system inspection and re-tensioning, as needed. Optional maintenance plan available from qualified Sportsfield Installer upon request





## Ultra Cross® Clients Include

Atlanta Falcons

Baltimore Orioles

Boston Red Sox

Chicago White Sox

Cincinnati Reds

Colorado Rockies

Denver Broncos

Detroit Tigers

Houston Astros

Kentucky

Los Angeles Angels

Miami Marlins

Michigan

Milwaukee Brewers

Minnesota Twins

Minnesota Vikings

New York Yankees

Notre Dame

Oakland A's

Oklahoma State

Philadelphia Phillies

San Diego Padres

San Francisco Giants

Seattle Mariners

St. Louis Cardinals

Tampa Bay Rays

Toronto Blue Jays

UCONN

Virginia Tech

Wake Forest

Washington Nationals







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