

# Synthetic Web Handbook

*Everything you need to take a load off your mind.*

**Tuffy** web  
products™

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# Take a load off your mind.

If you're looking for a full line of proven synthetic web slings for your many different loads, you've come to the right place. You'll find everything you need in this handbook, including:

## Information to help you fit web slings to your application.

In this handbook, you'll find how to match the sling to your load according to rated capacity, how to use the right hitch, how to calculate the load on each leg of a sling and how to adjust the rated capacity of choker hitches. You'll also find out how to choose the right material, coatings and wear pads to fit your many different lift requirements.

## One of the industry's most complete lines of synthetic web products.

One size does not fit all. On the following pages, you'll see our complete line of synthetic web products including:

- *Heavy-duty web sling products in 10 standard types.*
- *Econylon™ light-duty web slings in five standard types.*
- *Web products for special needs such as boat lifting applications, truck tiedowns and many others.*
- *Flexi-Grip® round slings.*
- *Custom-made web products to fit your unique needs.*
- *Specifications on the hardware you'll need.*

## Details on proper care and maintenance.

You'll also find out how to care and maintain web slings in this handbook with special sections on troubleshooting, proper inspection, cleaning and storage to help you make the most of your web slings.

## Proven experience in technical and sales support.

Nobody else has more experience in the lifting industry than we do. Look to us for engineering assistance in sling selection and design, including experience in high-capacity, multiple-sling rigging systems. We also offer expert technical sales support at the local level.

Call us today, and we'll help you take a load off your mind.



# How a sling's rated capacity is calculated to match your load.

**A**ll the synthetic web products in this handbook are both the same and different. They all have the same proven workmanship and long-lasting quality you can depend on. But they've all been engineered to give you different performance traits and rated capacities to perform to your different lifting needs.

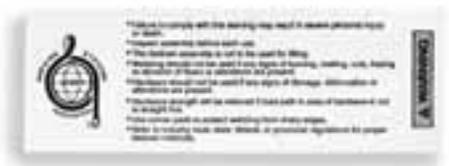
## The factors for calculating a sling's rated capacity.

**W**e use the following guidelines for calculating a sling's rated capacity:

- 1. Web tensile strength.** The foundation for the calculation. Every webbing material is made with a specified nominal strength, measured in pounds per inch of width, in two basic grades. The webbing manufacturer is required to meet or exceed these nominal strengths with written proof. Any variation must exceed these ratings. This nominal strength of the webbing is used to calculate the sling's rated capacity.
- 2. A "fabrication factor."** This compensates for the reduction in webbing strength that occurs due to stitching and tapering. The greater the stitching, the more the reduction in webbing strength. Two-ply slings, for example, require more stitching than one-ply slings, thereby increasing the fabrication factor for the two-ply sling. Another factor is applied when webbing must be tapered such as in slings' eyes.
- 3. Hardware strength.** This becomes a factor only when the nominal strength of the hardware is lower than the nominal strength of the sling. If so, the nominal strength of the hardware is used in calculating a sling's rated capacity.
- 4. Design factor.** After web nominal strength has been adjusted by applying the fabrication factor, the sling's rated capacity is then determined by using a design factor of 5 to 1, as specified by American National Standards Institute (ANSI) standard ANSI B30.9, Section 9-5.2. ANSI and OSHA both require sling manufacturers to document published sling ratings with records of test data.
- 5. Random testing.** In addition to using the above factors for calculating each sling's rated capacity, we test randomly selected slings from production runs to make sure every new sling meets or exceeds specifications and the rated capacity.

## We take responsibility for every sling.

**T**hat's why we sew a permanent tag on each new sling to show its rated capacity and can trace each sling to a manufacturing work order. It's not only a stamp of quality assurance, it's also a permanent record for us to know the precise sources and specification of webbing and hardware, even the machine operator who made the sling. Think of it as our seal of approval. What better way to take a load off your mind?



## Take special precautions.

**B**efore installing your slings, always read and follow the warning tag.

**How to order:** Page 26

# Choose the right hitch for your load.

**B**y using the following descriptions, you'll ensure the right choice when selecting a hitch for your various lifting operations:

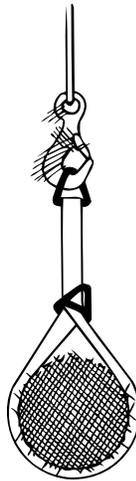
**Vertical.** Also called straight hitches. These attach by simply using a sling to connect a lifting hook to a load. Use the sling to its full rated

lifting capacity, but never above it. Use a tagline to keep the load from rotating, which may damage the sling. When you attach two or more slings to the same lifting hook, the total hitch becomes a lifting bridle, distributing the load among the individual slings.

When using two or more slings, remember that the sling angle affects the slings' rated capacities.

**Choker.** These hitches are used when the load won't be seriously damaged by the sling body (or vice versa) and when the lift requires the sling to hug the load. These reduce a sling's lifting capability.

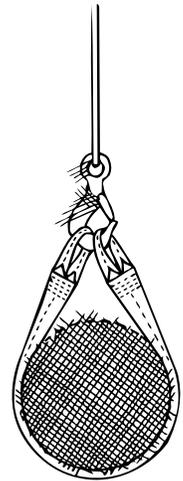
The diameter of the bend where the sling contacts the load should keep the point of choke against the sling body — never against a splice or the base of the eye. When a choke is used at an angle of less than 120°, the sling rated capacity must be reduced.



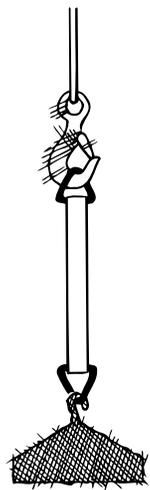
**Choker**

Two notes of caution: always pull a choker hitch tight before a lift is made — not during the lift. And never use only one choker hitch to lift a load that may shift or slide out of the choke.

**Basket.** These hitches distribute a load between the two legs of a sling within the limitations described below.



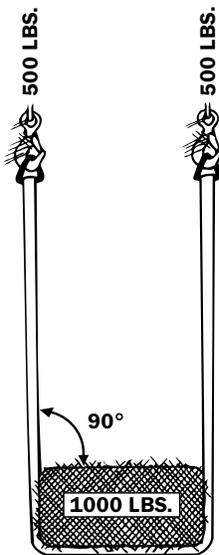
**Basket**



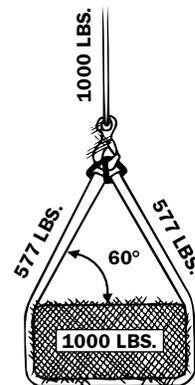
**Vertical**

## Calculate the load of basket hitches.

**T**here's an important principle to remember before you calculate your load. As the horizontal angle of a sling



decreases, the load on each leg increases (see illustrations at right). That's true whether you use a single sling as a basket or two slings with each in a straight pull such as a two-legged bridle.



Anytime you lift a load with a leg (or legs) of a sling at an angle, you can calculate the load per leg as well as the sling's rated capacity by using the following three-step formula.

### 1. Divide your total load by the number of legs you're using.

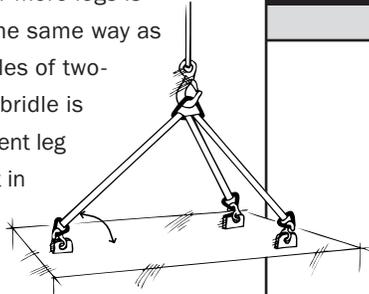
This gives you the load per leg if the lift were being made with all

#### Example 1:

1. Total load is 1,000 lbs. divided by two legs = 500 lbs. (load per leg if vertical lift).
2. Horizontal sling angle is 60°.
3. Multiply 500 lbs. by 1.154 load factor (from table) = 577 lbs. actual load per leg.

## Calculating the angle of bridles.

**T**he horizontal angle of bridles with three or more legs is measured the same way as horizontal sling angles of two-legged hitches. If a bridle is designed with different leg lengths, it may result in different horizontal angles. Normally, the leg with the smallest horizontal angle will carry the greatest load. That means you should use the smallest horizontal angle when you calculate the actual leg load and evaluate your sling's rated capacity.



Load factor guidelines	
Leg angle	Load factor
90°	1.000
85°	1.003
80°	1.015
75°	1.035
70°	1.064
65°	1.103
60°	1.154
55°	1.220
50°	1.305
45°	1.414
40°	1.555
35°	1.743
30°	2.000

In extreme angular conditions, an engineering analysis should be made.

lifting vertically. All of these calculations assume the center of gravity is directly below the hook. If not, more complicated engineering calculations are needed.

### 2. Find out the angle between the legs of the sling and the horizontal plane.

### 3. Multiply the load per leg (from step 1) by the load factor for the leg angle you're using (from the table above).

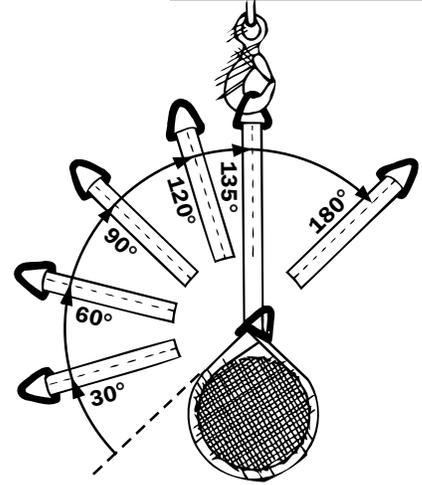
This gives you the actual load on each leg for this lift and angle. The actual load must never exceed the sling's rated capacity.

## Adjusting choker hitch rated capacity.

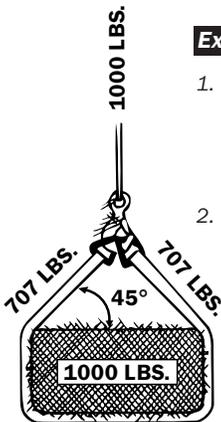
**W**hen a choker hitch is drawn tight at an angle of less than 120°, you'll need to reduce the hitch's rated capacity to allow for loss of rated capacity as the chart shows. Our tests have shown that

\*Percent of sling's rated capacity in a choker hitch.

Angle of choke	Rated capacity*
120°-180°	100%
60°-119°	95%
0°-59°	90%

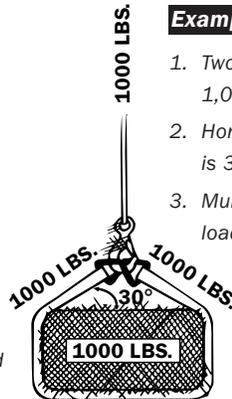


when the angle was less than 120°, the sling body always failed at the point of choke when pulled to maximum. You must always allow for this anytime you use a choker hitch to shift, turn or control a load, or when the pull is against the choke in a multi-leg lift.



#### Example 2:

1. Total load is 1,000 lbs. divided by two legs = 500 lbs. (load per leg if vertical lift).
2. Horizontal sling angle is 45°.
3. Multiply 500 lbs. by 1.414 load factor (from table) = 707 lbs. actual load per leg.



#### Example 3:

1. Two-leg total load is 1,000 lbs.
2. Horizontal sling angle is 30°.
3. Multiply by 2 and actual load is 1,000 lbs.

**WARNING:** Horizontal sling angles less than 30° shall not be used.

**How to order:** Page 26

# Choose material, coatings and wear pads to fit your load.

## Choose nylon or polyester material.

**B**oth materials are heavy webbing loomed specifically to deliver dependable service in tough industrial conditions. Each is offered in two grades or strength ratings, identified in the numbering code of every stock number (see page 26 for details). Choose the strength that fits your application.

Nylon and polyester perform equally well in many applications, but each is designed for use in specific conditions. Here's a summary of their differences and similarities.

### Stability under exposure to many common chemicals.

Chemical	Nylon	Polyester
Acid	NO	*
Alcohol	OK	OK
Aldehydes	OK	NO
Strong alkalis	OK	**
Bleaching agents	NO	OK
Dry cleaning solvents	OK	OK
Ethers	OK	NO
Halogenated hydrocarbons	OK	OK
Hydrocarbons	OK	OK
Ketones	OK	OK
Oil, crude	OK	OK
Oil, lubricating	OK	OK
Soaps, detergents	OK	OK
Water, seawater	OK	OK
Weak alkalis	OK	OK

\*Disintegrated by concentrated sulfuric acid.

\*\*Degraded by strong alkalis at elevated temperatures.

## Differences.

**Elastic stretch.** Nylon will stretch about 6% when loaded — about twice that of polyester — at sling's rated capacity and still return to original length. Overloading beyond rated capacity will permanently stretch and weaken both types.

**Stability to acids vs. alkalis.** In general, nylon is more stable when exposed to alkalis, while polyester performs better when exposed to acids. But there are exceptions to each. For more details, please check with us.

## Similarities.

**Handling characteristics.** Each type handles the same way. Water absorption is also low for both, which means the sling's rated capacity isn't seriously affected.

**Identical temperature constraints.** Neither nylon nor polyester should be exposed to heat exceeding 194° F (90° C) or below -40° F (-40° C).

## Susceptibility to prolonged

**sunlight.** Although we've added special treatments to provide some protection against long-term exposure to direct sunlight, both nylon and polyester are vulnerable. In direct exposure to sunlight, properly stabilized nylon outperforms polyester, but when exposed under glass, it's polyester that outperforms nylon. We recommend you store both types inside or under cover.

**Stability under exposure to many common chemicals.** As shown in the chart, neither is affected by common chemicals, normal dry-cleaning solutions, or soap and water. Both also retain their strength in oil and grease.

## Both materials work best clean.

Neither material supports the growth of mildew or bacteria, although dirt may accumulate on slings to support such growth. That's why we recommend cleaning with soap or detergent and water when needed.

## Reduce edge cutting by over 60% with optional Scuff-Edge® webbing.

**T**he first place you normally see damage to a web sling is along its edges. Once a cut starts, it quickly spreads across the face of the webbing and shortens its useful life. With Scuff-Edge webbing, you can increase the resistance to edge cutting over 60% compared to standard sling webbing, according to independent research.

Scuff-Edge webbing has a patented polymer-coated web edge woven into slings that reduces edge abrasion as well as edge cutting to help make the most of your sling's useful life. It's easy to identify with its yellow body and black edge.

Slings with Scuff-Edge webbing are available only in the 900 series and have the same rated capacities as Types 1-5.

## Increase wear protection with optional wear pads.

**W**ear protection is standard only on Types 6 and 7. If you plan to use any of our other slings in damaging conditions, please specify wear pads when you order (see page 27 for details).

Our padded slings include a nylon

and polyester buffer designed specially for this application. They're also available in synthetic leather that's more economical and stiffer than regular leather or in the same material as the sling body. You may choose another material if you wish — please specify when you order.

### Choose from four types of wear pads.



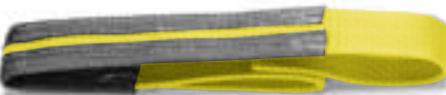
#### Regular.

An extra layer of material is sewn at the wear points on either or both sides of the sling body or eyes. Multiple layers are also available upon request.



#### Sleeve or tube.

Protects both sides of the sling body, and you can easily slide it across the sling. It remains stationary as the sling stretches while the load is being lifted.



#### Edge guard.

Pads are sewn along the edges of the sling body to offer extra protection at a critical wear area.



#### Wrap.

Similar to the sleeve, but is sewn onto the sling body to protect the edges as well as the lifting surface.

## Permanent ID tag on all slings.

**E**ach sling features a tag that provides a durable record of the type and stock number as well as the vertical, choker and basket hitch rated capacities for the sling. The standard tag is vinyl and can be imprinted with additional information if needed. (leather tags can be provided for an additional charge)

Regardless of its construction, each sling must have a tag attached to it. If not, you should remove sling from service per OSHA and ANSI B30.0 requirements.



## Red-Guard® wear warning tells you when to replace sling.

**S**tandard in all slings except Econylon™, Red Guard web features inner, load-bearing yarns that carry over 80% of the load. When the protective outer layer of webbing is worn away or damaged, it exposes the red yarns of the inner layer to give you a telltale warning. If visible, remove sling from service immediately.



## Increase wear protection on your slings with optional coatings.

**T**o protect the finished webbing against moisture and dirt penetration, we treat all our sling webbing with a special coating during the final stages of looming to promote cohesion of the yarns in the fabric. This also helps reduce abrasion.

You may also choose a coating of **Neoprene** if you wish. We'll apply it after sling fabrication but it will increase the stiffness of the finished sling. The coating helps improve abrasion resistance and helps decrease absorption of fluids and dirt. See order form on page 27 for details.

**How to order:** Page 26

## Triangle-Choker TCA/TCS – Type 1

**T**hese are nylon or polyester web slings with steel or aluminum end fittings for use in vertical choker and basket hitch applications.



## Triangle-Triangle TTA/TTS – Type 2

**T**hese are nylon or polyester web slings with steel triangles, aluminum triangles, links or shackles for use in vertical or basket hitch applications.



**Rated capacity in pounds**

Stock #	Width (")	Ply	Vertical	Choker**	Basket	60°	45°	30°
								
*1-602	2	1	2,400	1,900	4,800	4,200	3,400	2,400
1-902	2	1	3,200	2,600	6,400	5,500	4,500	3,200
2-602	2	2	4,800	3,800	9,600	8,300	6,800	4,800
2-902	2	2	6,400	5,100	12,800	11,100	9,000	6,400
1-603	3	1	3,600	2,900	7,200	6,200	5,100	3,600
1-903	3	1	4,800	3,800	9,600	8,300	6,800	4,800
2-603	3	2	6,700	5,300	13,300	11,500	9,400	6,700
2-903	3	2	8,900	7,100	17,800	15,400	12,600	8,900
1-604	4	1	4,800	3,800	9,600	8,300	6,800	4,800
1-904	4	1	6,400	5,100	12,800	11,100	9,000	6,400
2-604	4	2	8,600	6,900	17,300	15,000	12,200	8,600
2-904	4	2	11,200	9,000	22,400	19,400	15,800	11,200
1-906	6	1	9,600	7,700	19,200	16,600	13,600	9,600
2-906	6	2	16,300	13,100	32,600	28,300	23,100	16,300
1-908	8	1	12,800	10,200	25,600	22,200	18,100	12,800
2-908	8	2	20,500	16,400	41,000	35,500	29,000	20,500
1-910	10	1	16,000	12,800	32,000	27,700	22,600	16,000
2-910	10	2	24,000	19,200	48,000	41,600	33,900	24,000
1-912	12	1	19,200	15,400	38,400	33,200	27,100	19,200
2-912	12	2	26,900	21,500	53,700	46,500	38,000	26,900

\* Insert TCA prefix for aluminum fitting or TCS prefix for steel fitting.

\*\* Choker rated capacities apply to Type 1 slings only.

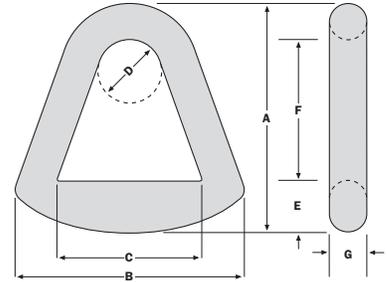
- Steel fittings are standard on both 1-ply and 2-ply slings.
- Aluminum fittings are available up to 6" in 1-ply capacities.
- These slings are also available in 3-ply and 4-ply construction. See page 10 for rated capacities.

**Warning:** Never use aluminum fittings where fumes, vapors, mists or liquids of caustics are present. Horizontal sling angles less than 30° shall not be used.

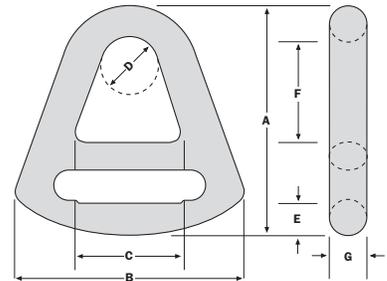
# Hardware specifications\*

## Aluminum forged triangles-chokers

ALUMINUM TRIANGLES										
Size	A	B	C	D	E	F	G	Approx. weight in lbs.	Rated capacity in lbs.	Minimum break
T2	4	3 5/8	2 1/4	1 3/4	15/16	2 3/8	9/16	.31	3,360	16,800
T3	5 1/4	5	3 1/4	2	1 3/16	3 5/16	5/8	.75	5,000	25,000
T4	6 1/4	6 5/8	4 3/8	2 3/8	1 7/16	4	11/16	1.1	6,700	33,500
T6	8 5/16	8 7/8	6 3/8	3 1/8	1 3/4	5 1/2	15/16	2.7	9,700	48,500

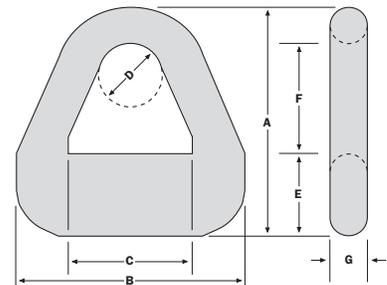


ALUMINUM CHOKERS										
Size	A	B	C	D	E	F	G	Approx. weight in lbs.	Rated capacity in lbs.	Minimum break
C2	6 1/8	5 1/4	2 1/8	1 3/4	15/16	2 3/8	9/16	.73	3,360	16,800
C3	7 1/2	7 1/8	3 1/8	2	1 1/8	3 5/16	5/8	1.3	5,000	25,000
C4	8 3/4	8 3/4	4 1/8	2 3/8	1 7/16	4	11/16	1.9	6,700	33,500
C6	11 5/16	11 3/4	6 1/8	3 1/8	1 3/4	5 1/2	15/16	5.1	9,700	48,500

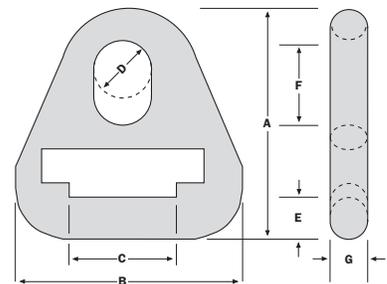


## Steel triangles-chokers

STEEL TRIANGLES										
Size	A	B	C	D	E	F	G	Approx. weight in lbs.	Rated capacity in lbs.	Minimum break
ST2	2 7/8	3 3/4	2 1/8	1 3/4	1	2 5/16	1/2	1	6,600	33,000
ST3	5 3/16	5	3 1/16	2	1 1/4	3 5/16	1/2	1.6	8,900	44,500
ST4	6 7/16	6 5/8	4 5/16	2	1 5/8	3 7/8	1/2	2.7	11,200	56,000
ST5	7 7/8	7 15/16	5 3/16	2 1/2	2	4 15/16	1/2	3.5	14,000	70,000
ST6	9	9 1/4	6 1/8	2 3/4	2 5/16	5 9/16	1/2	5.3	16,800	84,000
ST8	11 7/16	12	8 1/4	3 5/8	2 7/8	7 3/16	3/4	12	22,400	112,000
ST10	13 1/4	14 1/8	10 1/8	4 7/8	3 5/8	8 1/4	3/4	17	28,000	140,000
ST12	13 13/16	16 7/16	12 3/8	5	4 1/16	8	3/4	19	32,000	160,000



STEEL CHOKERS										
Size	A	B	C	D	E	F	G	Approx. weight in lbs.	Rated capacity in lbs.	Minimum break
SC2	6	5 1/2	2 1/8	2	1 1/16	2 1/4	1/2	2	6,600	33,000
SC3	7 1/2	7	3 1/8	2	1 3/16	3 3/16	1/2	2.9	8,900	44,500
SC4	9 5/16	9 9/16	4 1/8	2 1/2	1 13/16	3 1/2	1/2	6	11,200	56,000
SC5	10 9/16	11 5/8	5 1/8	2 3/4	2 1/16	4 7/16	1/2	7	14,000	70,000
SC6	12	12 3/4	6 1/8	2 7/8	2 11/16	4 9/16	1/2	9.8	16,800	84,000
SC8	14 7/16	16 1/2	8 1/8	5	2 13/16	6 7/16	3/4	24	22,400	112,000
SC10	16 1/2	18 3/4	10 1/4	5 1/8	3 1/2	7 5/8	3/4	28	28,000	140,000
SC12	19 1/4	22 5/8	12 1/8	5 1/2	4 1/4	9 3/4	3/4	40	32,000	160,000



\*See page 15 for other Type 2 hardware specifications.

**How to order: Page 26**

# Eye & Eye-Flat EEF – Type 3

# Eye & Eye-Twist EET – Type 4

### Rated capacity In pounds

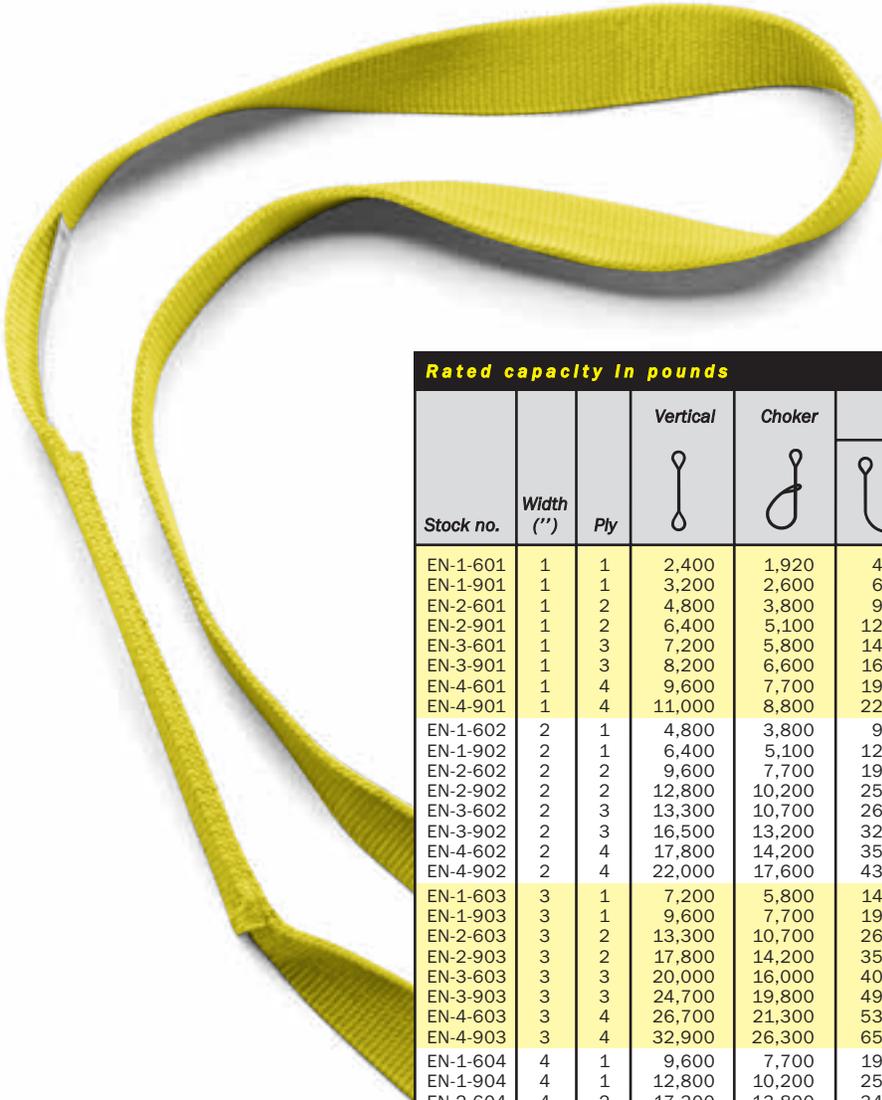
Stock no.	Width (")	Ply	Vertical 	Choker 	BASKET HITCH				Nominal Eye Length L (")	Nominal Eye Width W (")
						60° 	45° 	30° 		
					*-1-601	1	1	1,200		
-1-901	1	1	1,600	1,300	3,200	2,800	2,300	1,600	9	1
-2-601	1	2	2,400	1,920	4,800	4,200	3,400	2,400	9	1
-2-901	1	2	3,200	2,600	6,400	5,500	4,500	3,200	9	1
-3-601	1	3	3,600	2,900	7,200	6,200	5,100	3,600	12	1
-3-901	1	3	4,100	3,300	8,200	7,100	5,800	4,100	12	1
-4-601	1	4	4,800	3,800	9,600	8,300	6,800	4,800	12	1
-4-901	1	4	5,500	4,400	11,000	9,500	7,800	5,500	12	1
-1-602	2	1	2,400	1,900	4,800	4,200	3,400	2,400	9	2
-1-902	2	1	3,200	2,600	6,400	5,500	4,500	3,200	9	2
-2-602	2	2	4,800	3,800	9,600	8,300	6,800	4,800	9	2
-2-902	2	2	6,400	5,100	12,800	11,100	9,000	6,400	9	2
-3-602	2	3	6,700	5,300	13,300	11,500	9,400	6,700	12	2
-3-902	2	3	8,200	6,600	16,500	14,300	11,600	8,200	12	2
-4-602	2	4	8,900	7,100	17,800	15,540	12,500	8,900	12	2
-4-902	2	4	11,000	8,800	22,000	19,000	15,500	11,000	12	2
-1-603	3	1	3,600	2,900	7,200	6,200	5,100	3,600	12	1 1/2
-1-903	3	1	4,800	3,800	9,600	8,300	6,800	4,800	12	1 1/2
-2-603	3	2	6,700	5,300	13,300	11,500	9,400	6,700	12	1 1/2
-2-903	3	2	8,900	7,100	17,800	15,400	12,600	8,900	12	1 1/2
-3-603	3	3	10,000	8,000	20,000	17,300	14,100	10,000	15	1 1/2
-3-903	3	3	12,300	9,900	24,700	21,400	17,500	12,300	15	1 1/2
-4-603	3	4	13,300	10,700	26,600	23,100	18,800	13,300	15	1 1/2
-4-903	3	4	16,500	13,200	32,900	28,500	23,300	16,500	15	1 1/2
-1-604	4	1	4,800	3,800	9,600	8,300	6,800	4,800	12	2
-1-904	4	1	6,400	5,100	12,800	11,100	9,000	6,400	12	2
-2-604	4	2	8,600	6,900	17,300	15,000	12,200	8,600	12	2
-2-904	4	2	11,500	9,200	23,000	20,000	16,300	11,500	12	2
-3-604	4	3	13,000	10,400	25,900	22,500	18,300	13,000	15	2
-3-904	4	3	15,300	12,200	30,600	26,500	21,600	15,300	15	2
-4-604	4	4	17,300	13,800	34,600	30,000	24,400	17,300	15	2
-4-904	4	4	20,400	16,300	40,800	35,300	28,800	20,400	15	2
-1-906	6	1	9,600	7,700	19,200	16,600	13,600	9,600	12	2
-2-906	6	2	16,300	13,100	32,600	28,300	23,100	16,300	15	2
-3-906	6	3	22,900	18,300	45,900	39,700	32,400	22,900	18	3
-4-906	6	4	30,600	24,500	61,200	53,000	43,200	30,600	18	3
-1-908	8	1	12,800	10,200	25,600	22,200	18,100	12,800	18	3
-2-908	8	2	20,500	16,400	41,000	35,500	29,000	20,500	18	3
-3-908	8	3	30,700	24,600	61,400	53,200	43,400	30,700	24	4
-4-908	8	4	41,000	32,800	81,900	70,900	57,900	41,000	24	4
-1-910	10	1	16,000	12,800	32,000	27,700	22,600	16,000	18	3 1/2
-2-910	10	2	24,000	19,200	48,000	41,600	33,900	24,000	18	3 1/2
-3-910	10	3	36,000	28,800	72,000	62,300	50,900	36,000	24	5
-4-910	10	4	48,000	38,400	96,000	83,100	67,900	48,000	24	5
-1-912	12	1	19,200	15,400	38,400	33,200	27,100	19,200	24	4
-2-912	12	2	26,900	21,500	53,700	46,500	38,000	26,900	24	4
-3-912	12	3	40,300	32,200	80,600	69,800	57,000	40,300	24	6
-4-912	12	4	53,700	43,000	107,400	93,000	76,000	53,700	24	6

\* Insert EEF prefix to indicate Type 3 and EET prefix to indicate Type 4.

See page 16 to see Types 3 and 4 light-duty slings.

**Warning:** Horizontal sling angles less than 30° shall not be used.

# Endless EN – Type 5



**T**hese are nylon or polyester web slings designed for use in vertical, choker and basket hitches. Legs may be spaced for load stability. Hook points can be tapered to fit hoist hooks and are reinforced upon request.

Rated capacity In pounds										
Stock no.	Width (")	Ply	Vertical	Choker	BASKET HITCH			TAPER		
									Width (")	Length (")
EN-1-601	1	1	2,400	1,920	4,800	4,200	3,400	2,400	—	—
EN-1-901	1	1	3,200	2,600	6,400	5,500	4,500	3,200	—	—
EN-2-601	1	2	4,800	3,800	9,600	8,300	6,800	4,800	—	—
EN-2-901	1	2	6,400	5,100	12,800	11,100	9,000	6,400	—	—
EN-3-601	1	3	7,200	5,800	14,400	12,500	10,200	7,200	—	—
EN-3-901	1	3	8,200	6,600	16,500	14,300	11,600	8,200	—	—
EN-4-601	1	4	9,600	7,700	19,200	16,600	13,600	9,600	—	—
EN-4-901	1	4	11,000	8,800	22,000	19,000	15,500	11,000	—	—
EN-1-602	2	1	4,800	3,800	9,600	8,300	6,800	4,800	1	9
EN-1-902	2	1	6,400	5,100	12,800	11,100	9,000	6,400	1	9
EN-2-602	2	2	9,600	7,700	19,200	16,600	13,600	9,600	1	9
EN-2-902	2	2	12,800	10,200	25,600	22,200	18,100	12,800	1	9
EN-3-602	2	3	13,300	10,700	26,600	23,100	18,800	13,300	*	*
EN-3-902	2	3	16,500	13,200	32,900	28,500	23,300	16,500	*	*
EN-4-602	2	4	17,800	14,200	35,500	30,800	25,100	17,800	—	—
EN-4-902	2	4	22,000	17,600	43,900	38,000	31,000	22,000	—	—
EN-1-603	3	1	7,200	5,800	14,400	12,500	10,200	7,200	1 1/2	12
EN-1-903	3	1	9,600	7,700	19,200	16,600	13,600	9,600	1 1/2	12
EN-2-603	3	2	13,300	10,700	26,600	23,100	18,800	13,300	1 1/2	12
EN-2-903	3	2	17,800	14,200	35,500	30,800	25,100	17,800	1 1/2	12
EN-3-603	3	3	20,000	16,000	40,000	34,600	28,200	20,000	*	*
EN-3-903	3	3	24,700	19,800	49,400	42,800	34,900	24,700	*	*
EN-4-603	3	4	26,700	21,300	53,300	46,200	37,600	26,700	—	—
EN-4-903	3	4	32,900	26,300	65,900	57,700	46,600	32,900	—	—
EN-1-604	4	1	9,600	7,700	19,200	16,600	13,600	9,600	2	12
EN-1-904	4	1	12,800	10,200	25,600	22,200	18,100	12,800	2	12
EN-2-604	4	2	17,300	13,800	34,600	30,000	24,400	17,300	2	12
EN-2-904	4	2	23,000	18,400	46,100	39,900	32,600	23,000	2	12
EN-3-604	4	3	25,900	20,700	51,800	44,900	36,600	25,900	*	*
EN-3-904	4	3	30,600	24,500	61,200	53,000	43,200	30,600	*	*
EN-4-604	4	4	34,600	27,600	69,100	59,900	48,800	34,600	—	—
EN-4-904	4	4	40,800	32,600	81,500	70,600	57,000	40,800	—	—
EN-1-906	6	1	19,200	15,400	38,400	33,200	27,100	19,200	2	15
EN-2-906	6	2	32,600	26,100	65,300	56,500	46,200	32,600	3	15
EN-3-906	6	3	45,900	36,700	91,700	79,400	64,900	45,900	*	*
EN-4-906	6	4	61,200	48,900	122,300	105,900	86,500	61,200	—	—
EN-1-908	8	1	25,600	20,500	51,200	44,300	36,200	25,600	3	18
EN-2-908	8	2	41,000	32,800	81,900	70,900	57,900	41,000	4	18
EN-3-908	8	3	61,400	49,100	122,900	106,400	86,900	61,400	*	*
EN-4-908	8	4	81,900	65,500	163,800	141,900	115,800	81,900	—	—
EN-1-910	10	1	32,000	25,600	64,000	55,400	45,200	32,000	3 1/2	18
EN-2-910	10	2	48,000	38,400	96,000	83,100	67,900	48,000	5	18
EN-3-910	10	3	72,000	57,600	143,900	124,700	101,800	72,000	*	*
EN-4-910	10	4	96,000	76,800	191,900	166,200	135,700	96,000	—	—
EN-1-912	12	1	38,400	30,700	76,800	66,500	54,300	38,400	4	18
EN-2-912	12	2	53,700	43,000	107,400	93,000	76,000	53,700	6	18
EN-3-912	12	3	80,600	64,500	161,200	139,600	114,000	80,600	*	*
EN-4-912	12	4	107,400	86,000	214,900	186,100	151,900	107,400	—	—

Please specify when sling is to be tapered at hook contact area.

\*Three-ply slings are tapered by special request only.

See page 16 to see Type 5 light-duty slings.

**Warning:** Horizontal sling angles less than 30° shall not be used.

**How to order:** Page 26

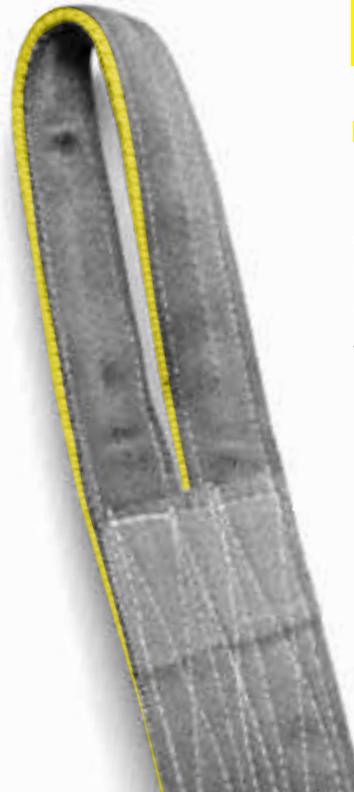
## Reversed Eye RE – Type 6

These are exceptionally durable slings that feature full body and eye protection. Eye openings are 90° to the sling body for tighter choker hitches and easy vertical and basket hitch rigging.



## Flat Eye FE – Type 7

These slings are the same construction as Reversed Eyes with one exception: the eyes are on the same plane as the sling body. Flat eye permits rigging through narrower openings and easier removal from under loads. These slings also rig effectively in choker and basket hitches.



Rated capacity in pounds

Stock no.	Width (")	Ply	Vertical	Choker	BASKET HITCH				Nominal Eye Width W (")	Nominal Eye Length L (")
						60° 	45° 	30° 		
*-1-602	2	1	2,400	1,920	4,800	4,200	3,400	2,400	1	9
-1-902	2	1	3,200	2,600	6,400	5,500	4,500	3,200	1	9
-2-602	2	2	4,800	3,800	9,600	8,300	6,800	4,800	1	12
-2-902	2	2	6,400	5,100	12,800	11,100	9,000	6,400	1	12
-1-604	4	1	4,800	3,800	9,600	8,300	6,800	4,800	2	12
-1-904	4	1	6,400	5,100	12,800	11,100	9,000	6,400	2	12
-2-604	4	2	9,600	7,700	19,200	16,600	13,600	9,600	2	12
-2-904	4	2	12,800	10,200	25,600	22,200	18,100	12,800	2	12
-3-604	4	3	13,300	10,700	26,600	23,100	18,800	13,300	2	15
-3-904	4	3	17,800	14,200	35,500	30,800	25,100	17,800	2	15
-4-604	4	4	17,800	14,200	35,500	30,800	25,100	17,800	2	15
-4-904	4	4	23,700	18,900	47,400	41,100	33,400	23,700	2	15
-1-906	6	1	9,600	7,700	19,200	16,600	13,600	9,600	1 1/2	12
-2-906	6	2	17,800	14,200	35,500	30,800	25,100	17,800	1 1/2	15
-3-906	6	3	26,600	21,300	53,300	46,200	37,600	26,600	3	18
-4-906	6	4	35,500	28,400	71,000	61,600	50,200	35,500	3	18

\* Insert RE prefix to indicate Type 6 and FE prefix to indicate Type 7.

NOTE: For Types 6 and 7 light-duty slings 3 1/2", please see page 16.

**Warning:** Horizontal sling angles less than 30° shall not be used.

## Wide Body Basket WBB – Type 8

These are designed for use in basket hitches where you need a wide sling for load stability and for proper handling of fragile or highly finished surfaces. Eyes of slings are tapered to fit in hoist or crane hooks.

Rated capacity In pounds								
Width Stock no.	(Inches)	Ply	BASKET HITCH				Nominal Eye Length L (Inches)	Nominal Eye Width W (Inches)
				60° 	45° 	30° 		
WBB-1-906	6	1	17,200	14,900	12,100	8,600	12	1 1/2
WBB-2-906	6	2	32,000	27,700	22,600	16,000	15	1 1/2
WBB-1-908	8	1	22,600	19,600	16,000	11,300	12	2
WBB-2-908	8	2	42,000	36,400	29,700	21,000	15	2
WBB-1-910	10	1	28,200	24,400	20,000	14,100	15	1 3/4
WBB-2-910	10	2	52,500	45,500	37,100	26,300	18	2 1/2
WBB-1-912	12	1	33,900	29,300	23,900	16,900	15	2
WBB-2-912	12	2	63,000	54,600	44,600	31,500	18	3*
WBB-1-916	16	1	43,900	38,000	31,000	22,000	18	3*
WBB-2-916	16	2	72,800	63,000	51,400	36,400	24	4*
WBB-1-920	20	1	51,000	44,100	36,000	25,500	24	3 1/2*
WBB-2-920	20	2	80,000	69,300	56,500	40,000	24	5*
WBB-1-924	24	1	56,400	48,900	39,900	28,200	24	4*
WBB-2-924	24	2	88,400	76,600	62,500	44,200	24	6*

\* Narrower taper available on special request only.

Wear pads are available for eyes and sling body on request. See page 7 for details.

**Warning:** Horizontal sling angles less than 30° shall not be used.

## Load Balancer LBB – Type 9 Basket

These are designed for applications where you need a wide sling for load stability and for proper handling of fragile or highly finished surfaces. They have lower rated capacity than the Wide Body Basket. Eyes are constructed to fit properly on small hoist hooks and are reinforced for longer life.

Rated capacity In pounds								
Stock no	Width (Inches)	Ply	BASKET HITCH				Nominal Eye Width W (Inches)	Nominal Eye Length L (Inches)
			60° 	45° 	30° 			
LBB-1-906	6	1	6,000	5,200	4,200	3,000	1	9
LBB-1-908	8	1	6,000	5,200	4,200	3,000	1	12
LBB-1-910	10	1	6,000	5,200	4,200	3,000	1	15
LBB-1-912	12	1	6,000	5,200	4,200	3,000	1	18
LBB-1-916	16	1	10,000	8,700	7,100	5,000	2	24
LBB-1-920	20	1	10,000	8,700	7,100	5,000	2	24
LBB-1-924	24	1	10,000	8,700	7,100	5,000	2	24

**Warning:** Horizontal sling angles less than 30° shall not be used.

**How to order:** Page 26

# Multi-Leg Bridles Type 10

**T**hese bridle assemblies are ideal for loads equipped with permanent lifting attachments. They're lightweight, easy to use and economical. Choose from nylon, Scuff-Edge® or polyester.

Choose from P (pear-shaped) or O (oblong) links for bridles. Hoist hooks and shackles are options on sling legs as well.

**Rated capacity in lbs. and hardware specs for two-legged bridle slings.**

Stock no.	Width (")	Ply	RATED CAPACITY			ALLOY PEAR LINK (P)	EYE HOOK (O)	OBLONG HOOK (SH)	HOIST Fabric Eye Dimensions	
			60°	45°	30°				L	W
						Size	Size	Size (W.L.L.)		
*-1-601	1	1	2,100	1,700	1,200	1/2	1/2	3/4	9	1
-1-901	1	1	2,800	2,300	1,600	1/2	1/2	1	9	1
-2-601	1	2	4,200	3,400	2,400	5/8	1/2	1 1/2	9	1
-2-901	1	2	5,500	4,500	3,200	3/4	5/8	2	9	1
-1-192	1 3/4	1	3,200	2,600	1,800	5/8	1/2	1	9	1 3/4
-1-262	1 3/4	1	4,600	3,700	2,600	3/4	5/8	1 1/2	9	1 3/4
-2-192	1 3/4	2	6,400	5,200	3,700	3/4	3/4	2	9	1 3/4
-2-262	1 3/4	2	9,200	7,500	5,300	1	3/4	3	9	1 3/4
-1-602	2	1	4,200	3,400	2,400	5/8	1/2	1 1/2	9	2
-1-902	2	1	5,500	4,500	3,200	3/4	5/8	2	9	2
-2-602	2	2	8,300	6,800	4,800	7/8	3/4	3	9	2
-2-902	2	2	11,100	9,000	6,400	1	1	5	9	2
-1-603	3	1	6,200	5,100	3,600	3/4	3/4	2	12	1 1/2
-1-903	3	1	8,300	6,800	4,800	7/8	3/4	3	12	1 1/2
-2-603	3	2	11,500	9,400	6,700	1 1/4	1	5	12	1 1/2
-2-903	3	2	15,400	12,500	8,900	1 1/4	1	5	12	1 1/2

\* Insert prefix by code letters for leg and end attachments (see above).  
All dimensions are in inches.

Note: one-, three- and four-legged assemblies are available on request.  
Additional end fittings can also be supplied. Please check with your distributor for details.

**Warning:** Horizontal sling angles less than 30° shall not be used.

## How to order multi-leg bridles.

- Choose the stock number you'll need for your application from the chart.
- Choose the end attachments you'll need, represented by the code letters shown above. Insert these letters as a prefix for your stock number in this sequence:
  - The link attachment: P (pear-shaped) or O (oblong) link.
  - The end attachment: SH (safety hook), E (sewn eye), P (pear-shaped), SS (shackle) or O (oblong). For each leg you need, use a letter to designate the end attachment.

For example, an "OEEE" is a three-leg assembly with an alloy oblong (O) link as leg attachment and a sewn eye (E) as the end attachments for each of the three legs.

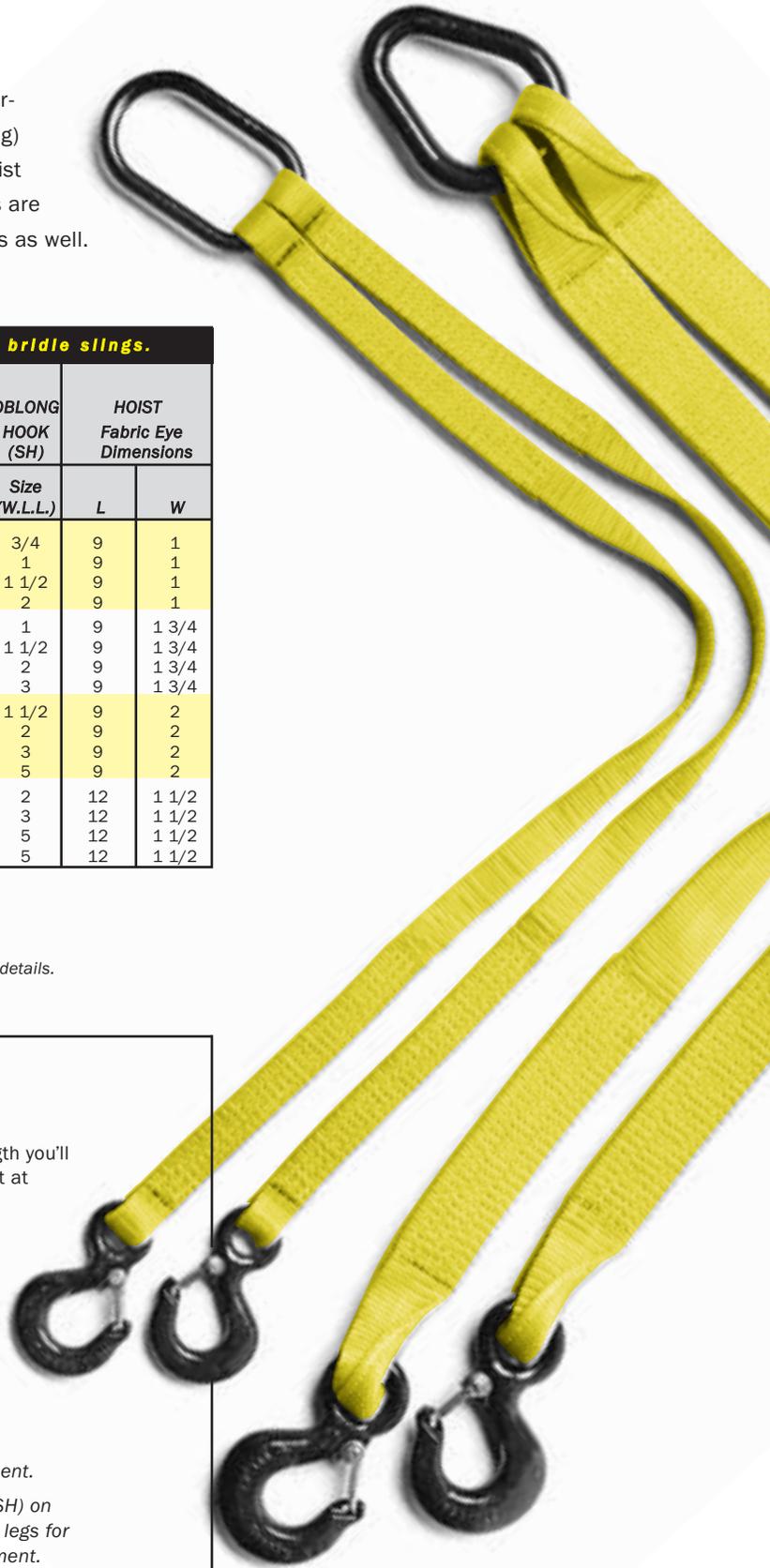
- Choose the length you'll need, and add it at the end of the stock number.

### Example:

A PSHSH-1-902 x 10'

is what to order when you need:

- A pear-shaped (P) link for the leg attachment.
- A safety hook (SH) on each of the two legs for the end attachment.
- A "-1-902" stock number representing a two-inch wide, one-ply sling.
- A "10-ft." designation when you need a bridle 10 feet long.



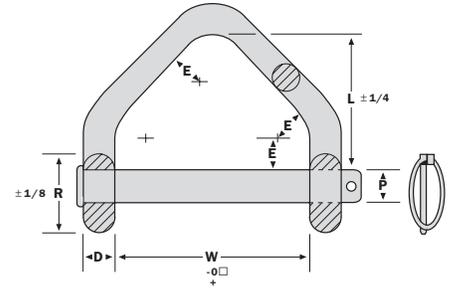
# Hardware specifications

## Steel shackles

Part no	Webbing width (Inches)	Ultimate strength in lbs.*	Working load limit	W	L	D	P	R	E	Wt. each lbs.
SS-2	2	32,200	8,050	2	2 5/8	9/16	3/4	1 5/8	1/2	1.7
SS-3	3	52,200	13,050	3	3 3/16	3/4	7/8	1 7/8	15/16	2.8
SS-4	4	43,200	10,800	4	3 7/16	3/4	7/8	1 7/8	1 1/4	3.1
SS-5	5	72,000	18,000	5	4 1/8	13/16	1	2 1/8	1 7/16	4.8
SS-6	6	72,000	18,000	6	4 7/8	15/16	1 1/8	2 1/8	3 1/4	6.8
SS-6H	6	95,400	24,000	6	5	1 1/8	1 1/4	2 5/8	3 1/4	9.8

\*Working load limit.

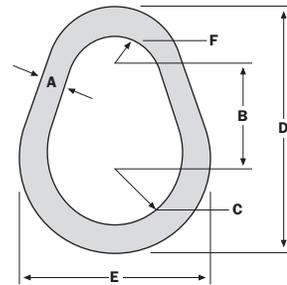
Shackle body is carbon steel, heat-treated and tempered. Shackle pin is alloy steel, heat-treated and tempered. Finish is hot dip galvanized. Klik pin is zinc-plated, furnished as standard cotter, but hair pin may also be used.



## Pear shaped links

Size inches (A)	B	C	D	E	F	Weight pounds each	Rated capacity single pull in lbs.
3/8	1.13	.75	3.00	2.25	.38	.13	1,800
1/2	1.50	1.00	4.00	3.00	.50	.55	2,900
5/8	1.87	1.25	5.00	3.75	.63	1.10	4,200
3/4	2.25	1.50	6.00	4.50	.75	1.95	6,000
7/8	2.63	1.75	7.00	5.25	.88	2.78	8,300
1	3.00	2.00	8.00	6.00	1.00	4.30	10,800
1 1/4	4.00	2.50	10.25	7.50	1.25	8.50	16,750
1 3/8	4.13	2.75	11.00	8.25	1.38	11.50	20,500

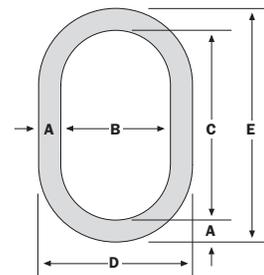
These links are standard in forming bridle slings. You may substitute rings or other links if desired. Links 3/8" through 1 3/8" are made with drop-forged steel. All others are welded.



## Alloy oblong links

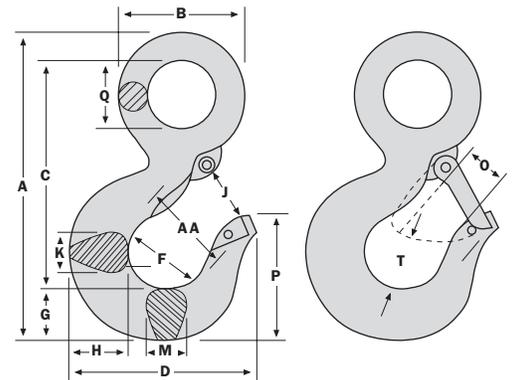
Size (")	Working load limit * (lbs.)	Weight each (lbs.)	Dimensions (Inches)				
			A	B	C	D	E
1/2	4,920	.89	.50	2.50	5.00	3.50	6.00
5/8	6,600	1.63	.63	3.00	6.00	4.25	7.25
3/4	10,320	2.25	.75	2.75	5.50	4.25	7.00
1	24,360	5.00	1.0	3.50	7.00	5.50	9.00
1 1/4	35,160	9.75	1.25	4.38	8.75	6.88	11.25

\* Based on single leg sling. Minimum ultimate load is 5 times the working load limit.



## Eye hoist hooks

Rated Capacity (tons)														
Carbon	Alloy	A	B	C	D	F	G	H	J	K	M	P	Q	AA
3/4	1	4.42	1.47	3.34	2.83	1.25	.73	.81	.90	.63	.56	2.00	.75	1.50
1	1 1/2	5.07	1.75	3.81	3.11	1.38	.84	.94	.93	.71	.63	2.24	.91	2.00
1 1/2	2	5.64	2.13	4.14	3.53	1.50	1.00	1.16	1.00	.88	.75	2.50	1.13	2.00
2	3	6.39	2.41	4.69	3.97	1.63	1.13	1.32	1.13	.94	.85	2.82	1.25	2.00
3	5	7.90	2.94	5.77	4.81	2.00	1.44	1.63	1.47	1.31	1.13	3.51	1.56	2.50
5	7	10.09	3.81	7.37	6.27	2.50	1.81	2.06	1.75	1.66	1.38	4.52	2.00	3.00
7 1/2	11	12.43	4.66	9.07	7.45	3.00	2.25	2.63	2.29	1.88	1.63	5.40	2.44	4.00
10	15	13.94	5.38	10.08	8.30	3.25	2.59	2.94	2.50	2.19	1.94	6.00	2.84	4.00
15	22	17.09	6.63	12.53	10.30	4.25	3.00	3.50	3.30	2.69	2.38	6.93	3.50	5.00



**How to order: Page 26**

## Ideal for lightweight lifts.

**W**e've combined "economical" and "nylon" to create Econylon, a full line of light-duty nylon web slings fabricated from economical military

webbing. The material is somewhat softer and more flexible than our Red-Guard® nylon, but without the red warning yarn. They feature the same standards of quality and workmanship as found in our other synthetic web

products. Econylon is ideal for your lighter lifts in non-abrasive conditions or many single-lift applications. If you plan to use one of these slings in abrasive situations, we recommend you add one of the wear pads seen on page 7.

## Eye & Eye-Flat/ Eye & Eye-Twist EEF – Type 3/ EET – Type 4

Rated capacity in pounds											
Width Stock no.	(inches)	Ply	Vertical 	Choker 	BASKET HITCH				Width W (inches)	Eye Length L (inches)	
						60° 	45° 	30° 			
*-1-181	1	1	1,120	900	2,200	1,940	1,600	1,120	1	9	
-2-181	1	2	2,200	1,800	4,500	3,900	3,200	2,200	1	9	
-1-192	1 3/4	1	1,840	1,500	3,700	3,200	2,600	1,840	1 3/4	9	
-2-192	1 3/4	2	3,700	2,900	7,400	6,400	5,200	3,700	1 3/4	9	
-3-192	1 3/4	3	5,500	4,400	11,000	9,600	7,800	5,500	1 3/4	12	
-4-192	1 3/4	4	7,400	5,900	14,700	12,800	10,400	7,400	1 3/4	12	
-1-262	1 3/4	1	2,600	2,100	5,300	4,600	3,700	2,600	1 3/4	9	
-2-262	1 3/4	2	5,300	4,200	10,600	9,200	7,500	5,300	1 3/4	9	
-3-262	1 3/4	3	7,300	5,900	14,700	12,700	10,300	7,300	1 3/4	12	
-4-262	1 3/4	4	9,800	7,800	19,500	16,900	13,800	9,800	1 3/4	12	

\* Insert EEF prefix to indicate Type 3 and EET prefix to indicate Type 4. **Warning:** Horizontal sling angles less than 30° shall not be used.

## Endless EN – Type 5

Rated capacity in pounds									
Width Stock no	(inches)	Ply	Vertical 	Choker 	BASKET HITCH				
						60° 	45° 	30° 	
EN-1-181	1	1	2,200	1,800	4,500	3,900	3,200	2,200	
EN-2-181	1	2	4,500	3,600	9,000	7,800	6,300	4,500	
EN-3-181	1	3	6,700	5,400	13,400	11,700	9,500	6,700	
EN-4-181	1	4	9,000	7,200	17,900	15,500	12,700	9,000	
EN-1-192	1 3/4	1	3,700	2,900	7,400	6,400	5,200	3,700	
EN-2-192	1 3/4	2	7,400	5,900	14,700	12,800	10,400	7,400	
EN-3-192	1 3/4	3	11,000	8,800	22,100	19,100	15,600	11,000	
EN-4-192	1 3/4	4	14,700	12,800	29,400	25,500	20,800	14,700	
EN-1-262	1 3/4	1	5,300	4,200	10,600	9,200	7,500	5,300	
EN-2-262	1 3/4	2	10,600	8,400	21,100	18,300	14,900	10,600	
EN-3-262	1 3/4	3	14,700	11,700	29,300	25,400	20,700	14,700	

## Reversed Eye/ Flat Eye RE – Type 6 / FE – Type 7

Rated capacity in pounds											
Stock no.	Width (inches)	Ply	Vertical 	Choker 	BASKET HITCH				Eye Width W(inches)	Eye Length L (inches)	
						60° 	45° 	30° 			
*-1-181	2	1	2,200	1,800	4,500	3,900	3,200	2,200	1	12	
-2-181	2	2	4,500	3,600	9,000	7,800	6,300	4,500	1	12	
-1-192	3 1/2	1	3,700	2,900	7,400	6,400	5,200	3,700	1 3/4	12	
-2-192	3 1/2	2	7,400	5,900	14,700	12,800	10,400	7,400	1 3/4	12	
-3-192	3 1/2	3	11,000	8,800	22,100	19,100	15,600	11,000	1 3/4	15	
-4-192	3 1/2	4	14,700	11,800	29,400	25,500	20,800	14,700	1 3/4	15	
-1-262	3 1/2	1	5,300	4,200	10,600	9,200	7,500	5,300	1 3/4	12	
-2-262	3 1/2	2	10,600	8,400	21,100	18,300	14,900	10,600	1 3/4	12	
-3-262	3 1/2	3	14,700	11,700	29,300	25,400	20,700	14,700	1 3/4	15	
-4-262	3 1/2	4	19,500	15,600	39,100	33,900	27,600	19,500	1 3/4	15	

\* Insert RE prefix to indicate Type 6 and FE prefix to indicate Type 7. **Warning:** Horizontal sling angles less than 30° shall not be used.

## Nets

**M**ade to order for:

- Buoys
- Pallets
- Cargo
- Vehicles
- Military Equipment
- Fall Protection
- Aerospace



## Lumber Sorter Slings

**A** must for all sawmills. These slings are made with 4" polyester webbing that's specially treated for abrasion resistance and a steel triangle sewn into one end. Choose from two webbing strengths and a length that fits your application.



## Stone Handling Slings

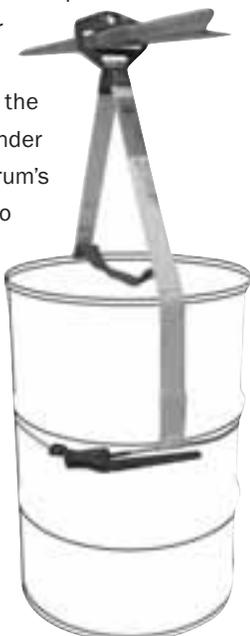


**I**deal for handling polished granite, marble blocks and concrete panels. Slings are made with white, untreated nylon webbing that won't rub off on stone. The webbing features a special facing of soft, abrasion-resistant fabric woven on one side. Also available with Neoprene coating for extra abrasion resistance, giving the sling more grip when handling wet stone.

## Drum-Tote Slings

**H**auling heavy 55-gallon drums has never been easier. Just slip

the 1/4" diameter binder assembly down the sides of the drum, latch the binder firmly below the drum's first rib and lift. No toppling or heavy shoving required. Drum-Tote can lift up to 1,000 lbs. and is adjustable to varying 55-gallon drum diameters. (Forklift or Hook attachment available.)



## Adjustable Matrix Slings

**A**djustable Load Rated Lifting Slings - Single Leg or Adjustable Bridles.



## Rope-Flex Bridle Slings

**D**urable - Low Stretch - High Strength Flexible Rope Slings.



**How to order:** Page 26

## Loads of security.

**W**e've combined "flexible" and "grip" to give you Flexi-grip®, the round sling that lifts many loads most other types of slings can't. With loads of flexibility, it wraps easily around a wide variety of difficult loads to give you loads of lifting security.

### Flexi-grip hugs and grips many unusual loads.

**F**lexi-grip isn't made like other types of slings. As a round sling, it features multiple loops of polyester fibers encased in a double-layer jacket that's very flexible and supple. Perfect for hugging many uneven and odd-shaped loads.

Its soft design also grips many loads tightly — especially when used as a choker — to reduce slipping during the lift. By simply adjusting the flexible sling, you can lift a variety of loads of different sizes and shapes.

### Low-stretch design makes rigging easier.

**F**lexi-grip slings feature a 100% polyester construction that stretches approximately 3% at its rated capacity and still returns to its original length. That minimizes adjustments for stretch and reduces head room problems of your lift.

### Light in weight, but high in strength.

**F**lexi-grip slings may have a soft, pliable appearance on the outside, but they contain high-strength polyester fibers on the inside. These fibers run throughout the sling's body for high load-bearing capacity. Choose from several rated capacities to match your lifting requirements (see chart).

### Two layers of protection.

**A** double-layer polyester jacket helps protect the Flexi-grip sling interior from two major enemies: abrasion and wear. It also serves as an effective barrier against ultraviolet degradation of the internal load-bearing fibers as well as harmful dirt and debris. Protection like this pays off in long-term performance for your sling.

### Polyester offers loads of advantages.

**T**he all-polyester construction virtually eliminates moisture absorption, rot and mildew for long service life. It also offers good resistance to common industrial acids (except concentrated sulfuric acid) and hot bleaching solutions. You can use Flexi-grip slings in the presence of many common chemicals such as alcohol, dry cleaning solvent, hydrocarbons, halogenated hydrocarbons, ketones, crude oil, lubricating oils, soaps, detergents, seawater and weak alkalis.

### Be careful.

**B**elow are some conditions to avoid when using Flexi-Grip slings.

- Do not expose Flexi-grip slings to strong alkalis at elevated temperatures, and never use at temperatures above 194° F (90° C) or below -40° F (-40° C).
- Avoid sling contact with any kind of sharp surfaces.
- Do not overload any sling beyond its rated capacity to prevent permanent stretch and weakening.

**Warning:** Failure to follow proper care, use and inspection criteria may result in personal injury. Do not exceed rated capacities.

## Specifications and rated capacity in pounds.

Color Code	Stock number	Approx. body diameter inches	Approx. body wt./ft. pounds	 Vertical	 Choker	 Basket	 60P	 45P
Purple	FG 0600	0.60	0.30	2,600	2,100	5,200	4,500	3,700
Green	FG 0800	0.80	0.40	5,300	4,200	10,600	9,200	7,500
Yellow	FG 1000	1.00	0.50	8,400	6,700	16,800	14,500	11,900
Tan	FG 1200	1.20	0.60	10,600	8,500	21,200	18,400	15,000
Red	FG 1300	1.30	0.80	13,200	10,600	26,400	22,900	18,700
White	FG 1400	1.40	0.90	16,800	13,400	33,600	29,100	23,800
Blue	FG 1550	1.55	1.20	21,200	17,000	42,400	36,700	30,000
Orange	FG 1750	1.75	1.50	25,000	20,000	50,000	43,300	35,400
Orange	FG 1950	1.95	2.00	31,000	24,800	62,000	53,700	43,800
Brown	FG 2350	2.35	2.80	40,000	32,000	80,000	69,300	56,600
Brown	FG 3150	3.15	3.60	53,000	42,400	106,000	91,800	74,900
Black	FG 3950	3.95	4.60	66,000	52,800	132,000	114,300	93,300
Black	FG 4800	4.80	5.80	90,000	72,000	180,000	155,900	127,300

*Rated capacities are based on current proposal for B30.9-6.*

**Warning:** Horizontal sling angles less than 30° shall not be used.

## Match the color to your lifting needs.

The jackets of Flexi-grip slings are color-coded by rated capacity. Choose from eight different colors to fit the rated capacity you need for your lift (see chart). Each sling also features a durable identification tag to indicate its size, type and rated capacity for your convenience.

## Flexi-grip options.

Flexi-grip slings are also available in three configurations:

- Endless-type slings that double the lifting legs in every application.
- Multi-leg bridles.
  - Eye and eye slings formed by enclosing the body of an endless sling in a tubular jacket for extra protection and durability.

Moveable wear pads made with durable polyester buffer or leather are also available to help protect against lifting hooks and corners of loads.

## Inspect your slings regularly.

Before each lift, visually inspect your Flexi-grip sling for any damage. Remove sling from service if you see:

- Missing or illegible identification tag.
- Melting, charring or weld spatter on any part of the sling.
- Holes, tears, cuts, embedded particles, abrasive wear or snags that expose the sling's core yarns.
- Broken or worn stitching in the cover that exposes the core yarns.
- Fittings that are damaged, stretched, cracked, pitted or distorted in any way.
- Knotting in the sling.
- Acid or alkali burns.
- Other visible damage that causes doubt as to the sling's strength.
- Loading a sling beyond its rated capacity.

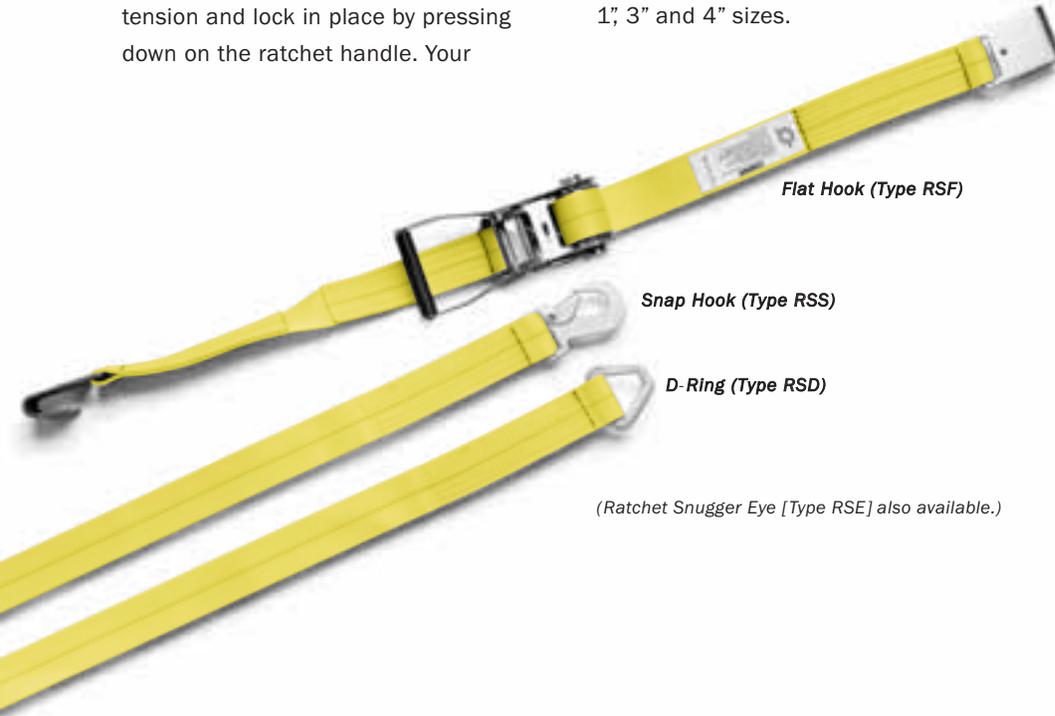
**How to order:** Page 26

# Ratchet Snugger® Binders

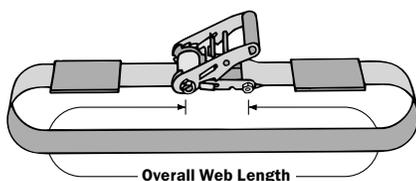
## Fast, one-handed snugdowns.

deal for use on pallets, in trucks or vans, baggage compartments, shipping containers or aircraft. Just snug down your load with a Ratchet Snugger control binder, adjust the tension and lock in place by pressing down on the ratchet handle. Your

load is secure. When unloading, you can release the Ratchet Snugger binder just as easily. Choose from 1,670-lb. to 3,300-lb. Working Load Limits (WLL) in 2" webbing. Also available in 1", 3" and 4" sizes.



**Ratchet Snugger Straight Assemblies (Type RSA).** One end of webbing is sewn to the ratchet head, leaving the other end free to pass around the load or through narrow openings to insert into the ratchet spool. Fabricated to any



practical web length plus 6" extra length for end hold. Optional sliding sleeve-type wear pads, ratchet pads and corner protectors help protect the webbing on both types of binders.

**Ratchet Snugger two-piece devices (Type RS\_\_).** All feature metal fittings or eyes sewn at the ends of two pieces of webbing with the shorter piece sewn to the ratchet head. The variable length piece is heat-sealed to prevent fraying for easy insertion into the ratchet spool. Fabricated to any practical web length (between bearing points of eyes or hooks) plus 6" extra length for end hold. Ratchet buckle and metal end fittings are plated to resist corrosion. Other fittings are also available.

# Hardware

## Flat Hooks

### Type RSF-1-802

Rated 3,300 lbs. WLL;  
10,000 lbs. nominal strength  
Order code letter F (1 3/4" or 2" only).

### Type RSF-1-502

Rated 2,200 lbs. WLL;  
6,000 lbs. nominal strength

## Snap Hooks

### Type RSS-1-502 & Type RSS-1-802

2" Snap Hook rated 3,300 lbs. WLL;  
10,000 lbs. nominal strength  
Order code letter S.

## Ratchets

### Standard handle

Rated 3,300 lbs. WLL;  
10,000 lbs. nominal strength

### Long/Wide Handle

Rated 3,300 lbs.  
WLL; 10,000 lbs. nominal strength

## D-Ring

### Type RSD-1-802

Rated 3,300 lbs. WLL;  
10,000 lbs. nominal strength  
Order code letter D.

# Truck Tie-down Assemblies

## Secure cargo on trucks and trailers.

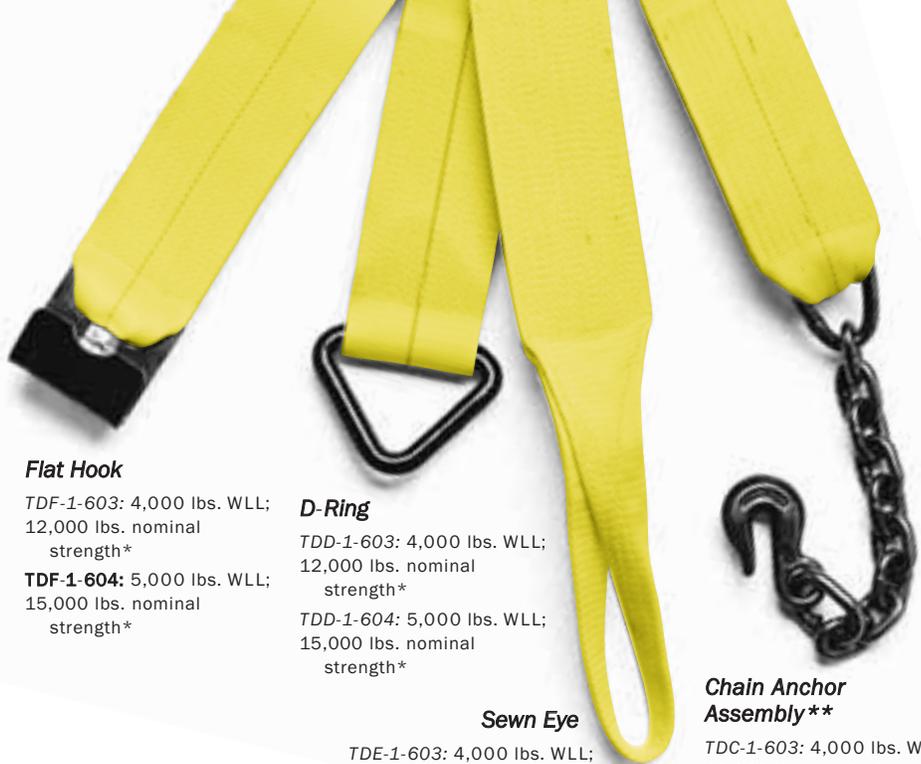
**W**ith a soft, pliable and non-abrasive polyester webbing, our Truck Tiedown Assemblies are ideal straps for securing cargo on flatbed trucks and trailers. They're lighter and easier to handle than chain load binders, and stronger and more durable than elastic tension bands. They also adjust easily in length to fit the size of load you're hauling.

The polyester webbing offers many advantages:

- *Fabricated to meet your specific order.*
- *Fits standard 3" and 4" winches.*
- *Low-stretch design (approximately 3% at Working Load Limit) for improved handling.*
- *High-strength design isn't affected by moisture.*
- *All cut ends are heat-sealed to prevent fraying.*
- *Corner protectors and sliding sleeves also available.*

## Other options.

1. Sliding winches designed to slide along the winch track are available. Please specify manufacturer of winch track when ordering.
2. Other winches and winch tracks are also available. For more information, please call your distributor, distribution center or the factory.
3. You may also order sliding sleeve-type wear pads and metal corner protectors (see page 7 for details).



### Flat Hook

*TDF-1-603: 4,000 lbs. WLL; 12,000 lbs. nominal strength\**

*TDF-1-604: 5,000 lbs. WLL; 15,000 lbs. nominal strength\**

### D-Ring

*TDD-1-603: 4,000 lbs. WLL; 12,000 lbs. nominal strength\**

*TDD-1-604: 5,000 lbs. WLL; 15,000 lbs. nominal strength\**

### Sewn Eye

*TDE-1-603: 4,000 lbs. WLL; 12,000 lbs. nominal strength\**

*TDE-1-604: 5,000 lbs. WLL; 15,000 lbs. nominal strength\**

### Chain Anchor Assembly\*\*

*TDC-1-603: 4,000 lbs. WLL; 12,000 lbs. nominal strength\**

*TDC-1-604: 5,000 lbs. WLL; 15,000 lbs. nominal strength\**

## Choice of four end treatments, each with two Working Load Limits.

\*\* Type TDG Grab Hook end fitting is the same as TDC without the chain section. Other end fittings are available on request.

\* **CAUTION:** do not subject these assemblies to loads greater than the Working Load Limits because permanent loss of strength may result. These cargo straps have a design factor of 3 calculated into the Working Load Limit.

## Two types of winches.



**Portable winch** provides flexibility of mounting position without need for winch track. Simply mount on side channel. Available with or without locking screws. Mandrel slotted for pull-through 3" and 4" webbing.



**Fixed winch** is designed for fixed mounting for use with loose end (pull-through) straps. Rugged 3/8" steel frame, 5/8" ratchet and pawl, hardened steel pawl pin, 4" slotted mandrel. Dimensions: 8 1/8" long, 5 1/2" high, 3 1/2" wide. Models available to store 30' of webbing.

# Sling Saver®

## Application Information

**W**ith Crosby's new sling saver line of hardware, you will get the full rated strength of the sling and extend it's life.

### Recommended Application Chart

<b>Application</b>	<b>Use</b>	<b>Comments</b>	
Web slings, connect to Pad Eye, Eye Bolt, Web or Lifting Lug.	S-281 Sling Saver Sling Shackle		<p><b>Always Insure Rated Working Load Limits are greater than the load placed on the fitting.</b></p>
Round Sling, connect to Pad Eye, Eye Bolt or Shackle Lifting Lug.	S-253 or S-252 Sling Saver		
Connect S-252 or S-253 Sling Saver shackles together.	S-256 Link Plate		
To keep the load centered on the Pin, thus keeping the sling positioned correctly in the shackle bow.	S-255 Spool		
Web Slings or Round Slings connecting to Master Links, Rings, or Crosby 320N Eye Hooks.	S-280 Sling Saver Web Connector with spool		
Web Slings or Round Slings connecting to Grade 8 Chain.	S-282 Sling Saver Chain Connector with spool		
High Strength, High Capacity Round Slings	WS-320A Web Sling Hook		
Choking with Web Slings or Round Slings	S-287 Sliding Choker Hook		
Master Links or Master Link Assembly to be sewn into eye of Web Sling or attached utilizing web connector.	Welded Master Link A-344 and Master Link Assembly A-347		
Web sling being used to lift die blocks, or other equipment where standard Hoist Rings are used.	HR-125		

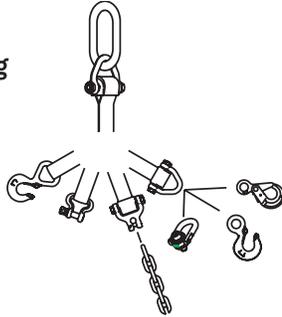
Crosby Sling Saver hardware meets the requirements for minimum stock diameter or thickness and effective contact width shown in the recommended standard specification for synthetic Polyester Roundslings by the Web Sling and Tie Down Association. WSTDA-RS1 (revised 2001).

# Sling Saver®

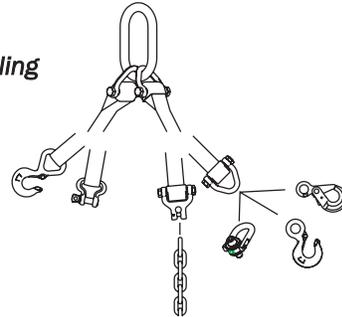
# Web Sling System

**T**his easy to use chart is designed to allow you to quickly determine the fitting required to create the Web Sling or Round Sling you need.

Single Leg Sling



Double Leg Sling



## Single and Double Leg Slings

Component Recommendations based on Type III, (Eye & Eye), Class 7, 2 Ply web slings.

S-280 Web Connector S-281 Web Sling Shackles S-282 Chain Connector												
Round Sling Size (No.)	Web Sling						Web Sling Hook WS-320 (tons)	Spectrum 8 Chain Size (in.) - (mm)	EyeHoist Hook S-320AN (tons)	Eye SHUR-LOC S-316A (in.)	Swivel Hoist Ring HR-125 (lbs.)	Master Link A-342 Single Leg (in.)
	Web Width (in.)	Eye Width (in.)	Ply	Working Load Limit (tons)								
1 & 2	2	2	2	3-1/4	3	3/8 - 10	3	1/2	7,000	5/8	3/4	
3	3	1.5	2	4-1/2	5	1/2 - 13	5	5/8	10,000	3/4	1	
4	4	2	2	6-1/4	-	5/8 - 16	7	5/8	15,000	1	1	
5 & 6	6	3	2	8-1/2	-	-	11	-	24,000	1	1-1/4	

## Triple and Quad Leg Slings

Component Recommendations based on Type III, (Eye & Eye), Class 7, 2 Ply web slings.

S-280 Web Connector S-281 Web Sling Shackles S-282 Chain Connector												
Round Sling Size (No.)	Web Sling						Web Sling Hook WS-320 (tons)	Spectrum 8 Chain Size (in.) - (mm)	EyeHoist Hook S-320AN (tons)	Eye SHUR-LOC S-316A (in.)	Swivel Hoist Ring HR-125 (lbs.)	Master Link A-342 Single Leg (in.)
	Web Width (in.)	Eye Width (in.)	Ply	Working Load Limit (tons)								
1 & 2	2	2	2	3-1/4	3	3/8 - 10	3	1/2	7,000	1	1	
3	3	1.5	2	4-1/2	5	1/2 - 13	5	5/8	10,000	1	1-1/4	
4	4	2	2	6-1/4	-	5/8 - 16	7	5/8	15,000	1-1/4	1-1/2	
5 & 6	6	3	2	8-1/2	-	-	11	-	24,000	1-1/2	1-3/4	

# How to inspect web slings.

All of our synthetic web products are designed for long life under punishing conditions, but they will eventually wear out after extended use. The key is knowing when to replace them, and that's why it's very important to inspect your slings on a regular basis.

We've developed an inspection program based on the procedure outlined in ANSI B30.9 that will make the most of your investment. It's based on four sound beliefs:

- The importance of following regular and uniform inspections.
- A respect for the capabilities and limitations of synthetic web slings.
- The need to keep complete, permanent records.
- Perhaps most importantly, a lot of common sense.

## How often to inspect slings.

The frequency of inspection depends on three important factors:

1. *Sling usage – the more you use a sling, the more you need to inspect it.*
2. *The working environment – the harsher the conditions, the more often you need to inspect.*
3. *Sling service life – based on your experience in using slings.*

It's a good idea for the person handling the slings to visually inspect all slings before each lift. Additional inspections should be performed at least annually by a qualified designated person and permanent records kept.

OSHA specifies, "Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use, where service conditions warrant." In other words, you should visually inspect your sling before each lift.

## When to replace slings.

Remove all slings, including Flexi-Grip® round slings, from service if you see damage such as the following, and return to service only when approved by a designated person. These are removal criteria established by ANSI B30.9:

1. *Acid or caustic burns.*
2. *Melting or charring of any part of the sling.*
3. *Holes, tears, cuts or snags.*
4. *Broken or worn stitching in load-bearing splices.*
5. *Excessive abrasive wear.*
6. *Knots in any part of the sling.*
7. *Excessive pitting or corrosion, or cracked, distorted or broken fittings.*
8. *Other visible damage that causes doubt as to the strength of the sling.*
9. *Missing or illegible sling identification.*

In addition, we recommend three other important reasons to remove slings from service:

1. *Anytime you see our Red-Guard® warning yarns.*
2. *Distortion of the sling.*
3. *Anytime a sling is loaded beyond its rated capacity for whatever reason.*

While most of these standards are very specific regarding reasons for removal, others require your good judgment. The critical areas to watch are wear to the sling body, the selvage edge of webbing and the condition of the sling eyes.

## Repair guidelines.

It's never enough to give slings temporary repairs. Always follow these guidelines:

1. Damaged slings should be repaired only by a sling manufacturer.

If that isn't possible, the repairman should certify in writing the sling's rated capacity.

2. Slings repaired by a manufacturer must be proof-tested to twice the designated rated capacity on the tag before returning it to service – and back it up with a certificate of the proof-testing.
3. Inspection records for individual slings that have been repaired should be updated with all the relevant information such as the circumstances involved and proof-testing.

## Our synthetic web products measure up.

Our synthetic web products don't merely meet our own strict standards for workmanship and performance. They also meet or exceed these military and federal specifications:

1. *ANSI Standard Z1.8 – specifications of general requirements for a quality program.*
2. *MIL-Standard-105 – sampling procedures and tables for inspection by attributes.*
3. *MIL-W-4088F – military specification for textile webbing – woven nylon.*
4. *MIL-W-23223A – military specification for slotted nylon webbing.*
5. *Fed. Spec. VT-285-E – federal specification for polyester thread.*
6. *Fed. Spec. VT-295-E – federal specification for nylon thread.*

In addition, all work conforms to standards established by the following national safety institutions and their respective regulations:

- *American National Standards Institute (ANSI) B30.9 Safety Standards for Cranes, Derricks, Hoists, Hooks, Jacks and Slings.*
- *Occupational Safety and Health Administration (OSHA) 1910.184*

# Identifying wear and abuse.

**T**hese are some of the most common types of web sling damage caused by abuse and misuse. When you see any of these problems during your regular inspection, stop. Replace the sling immediately because the damage is done. Never attempt to mend the sling yourself and, more so, never attempt to lift with these slings.

Whether a sling is damaged from improper use or normal wear, the same rule applies in all cases: always cut the sling eyes and discard the sling right away when you see damage. Only with properly working slings can you take a load off your mind.



## Tensile break

**T**he distinguishing sign of a tensile break is a frayed appearance close to the point of failure or damage. This usually happens when a sling is loaded beyond its existing strength. The photo shows an example of a sling pulled to destruction on a testing machine. You can avoid tensile breaks by never overloading your sling.



## Cut

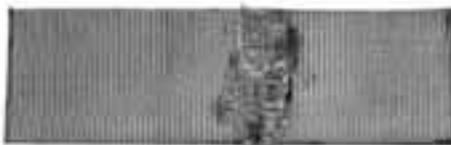
**Y**ou can easily see a cut in your sling when you see a clean break in the webbing structure or fibers. This usually results when a sling contacts a sharp object or unprotected edge of a

load. This can happen anywhere on the sling body or eyes. Many slings feature Red Guard warning yarns to alert you of serious cuts. One way you can avoid cuts from contacting sharp corners is to use wear pads on the sling to protect the fabric. See page 7 for details.



## Cut and tensile damage

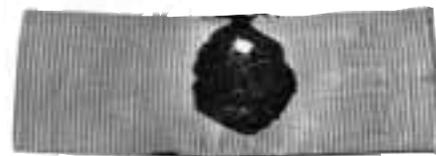
**A** good example is the photo shown here. It shows what can happen when you use a sling that's already been cut by a sharp object along one edge of the sling body. The cut dramatically reduces lifting capacity, and continued use will ultimately lead to sling failure, usually at a load far below the sling's rated capacity. The solution, obviously, is to never use a sling after it's been cut.



## Abrasion damage

**A**nytime you see frayed fibers on the surface exposing the "picks," or cross fibers, of the webbing that hold the load-bearing (lengthwise) fibers in place, it's abrasion damage. The most common abrasion damage occurs either when the sling slips while in contact with a load during a lift or when the sling is pulled from under a load. When you see the Red Guard warning yarns exposed, it's your signal that serious damage — and loss of lifting capacity — has occurred. We recommend that slings with any damage to load-

bearing fibers be discarded. Wear pads are one way to avoid this damage.



## Acid damage

**I**t's true nylon and polyester webbing are stable when exposed to many common chemicals, but they should never be exposed to any strong acids or corrosive liquids whenever possible. The same is true for metal fittings on slings.

**Example 1 (top photo).** This is what happens when sulfuric acid, like car battery acid, is heated to the boiling point and dropped on nylon webbing. The charring on the surface fibers deteriorates the sling and will continue to get worse, severely affecting the webbing strength.

**Example 2 (bottom photo).** This is what happens when nylon webbing is immersed in sulfuric acid at room temperature for three weeks, resulting in major damage. Note the fibers are softened and swollen, and the entire fabric is grossly distorted, virtually destroying the webbing. You can help prevent this damage by never storing slings in areas where they may be exposed to acid or acid fumes, which are as destructive as liquid.

## Why proper cleaning is vital.

All it takes is a little ordinary dirt, grit and grime to reduce the overall strength and life of your sling. It's very easy for these contaminants to penetrate between fibers anytime the webbing bends, pulls tight against loads, or stretches and relaxes during loading and unloading. Once in place, they grind against the fibers, reducing their strength and useful life.

That's why it's a good idea to properly store your slings when they're out of service and to clean them when they become soiled. When slings are clean, they're not only easier to inspect, they're also stronger and more durable.

There are many procedures you can use to clean your slings, depending on how soiled they are. For everyday dirt and grime, you can clean with soap or detergent and water for good results.

Whatever cleaning method you use, always hang your washed slings in a dry, sheltered place. Always keep slings from prolonged contact with direct sunlight during drying and storage because ultraviolet rays can degrade synthetic fibers. Nylon or polyester slings that have been dyed any color but white will fade somewhat due to washing, but this in no way affects the strength of the webbing.

Both nylon and polyester webbing have an extremely low water absorption rate, making them flexible, light and easy to handle even after prolonged soaking in water. Both also show excellent resistance to mold, mildew and fungus, although dirt that accumulates on slings may support their growth, and that's why regular cleaning is very important.

## How to order.

We know that no two applications are the same. Many of the lifting devices in this handbook are custom-made to your specific dimensions and requirements. To help us serve you better, please provide the following information in the appropriate location on the facing page:

1. **Sling type and stock number as stated in this handbook.**
2. **The length of sling, measured as shown on facing page.**
3. **The width of sling body.**
4. **The webbing material — nylon or polyester or Scuff-Edge® webbing.**
5. **Description and placement of any wear pads.**
6. **Protective coating if you desire an optional coating.**
7. **A description of end fittings for slings where a choice of fittings is offered.**

### Example of sling order.

Let's say you want a 2-ply, Eye & Eye Flat sling of the strongest grade nylon webbing, 4" wide and 10' long, eye-to-eye pull, with 4' of regular wear pad centered on the sling body, and with the sling coated with Neoprene after fabrication.

**The correct specifications for you to order would be:**

**EEF-2-904 x 10'**

Nylon, 4" x 10' with 4' (ft.) of regular wear pad centered on the sling body, Neoprene coated.

(See below.)

### EEF

#### First group of letters:

The type of sling is identified by 2- or 3-letter codes, as shown in the list below.

- TCA** - **Type 1**, Triangle-Choker, aluminum
- TCS** - **Type 1**, Triangle-Choker, steel
- TTA** - **Type 2**, Triangle-Triangle, aluminum
- TTS** - **Type 2**, Triangle-Triangle, steel
- SSS** - **Type 3**, Shackle-Shackle, steel
- EEF** - **Type 3**, Eye and Eye, flat
- EET** - **Type 4**, Eye and Eye, twist
- EN** - **Type 5**, Endless
- RE** - **Type 6**, Reversed Eye
- FE** - **Type 7**, Flat Eye
- WBB** - **Type 8**, Wide Body Basket
- LBB** - **Type 9**, Load Balancer Basket

### 2

#### First number:

This number indicates the number of plies in a particular sling body.

### 904 x 10'

#### Second group of numbers:

The first of these three digits indicates the grade of webbing, either 6 or 9, with 9 being the higher strength fabric.

The second and third digits indicate the webbing width, which range from 01 to 12 inches in diameter.

**NOTE: Each sling is identified in this format with a vinyl tag sewn to the sling body. Leather tags are available on special orders.**

**Each synthetic web product is color coded.** Standard nylon slings are made with yellow webbing with white nylon thread. Polyester slings feature yellow webbing with blue polyester indicator stripe with yellow thread.

# Request for quotation.

**Photocopy, fill out and fax this page to:  
Your Tuffy distributor**

COMPANY NAME \_\_\_\_\_

DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

REFERENCE NUMBER \_\_\_\_\_

CITY STATE ZIP \_\_\_\_\_

( ) ( ) \_\_\_\_\_

PHONE FAX \_\_\_\_\_

NAME \_\_\_\_\_

E-MAIL \_\_\_\_\_

## Your sling specifications:

Rated capacity required \_\_\_\_\_

Rated capacity required \_\_\_\_\_

Design factor required \_\_\_\_\_

Design factor required \_\_\_\_\_

Type of hitch \_\_\_\_\_

Type of hitch \_\_\_\_\_

Quantity \_\_\_\_\_

Quantity \_\_\_\_\_

Sling type (REFER TO CHART.) \_\_\_\_\_

Sling type (REFER TO CHART.) \_\_\_\_\_

Number of plies \_\_\_\_\_

Number of plies \_\_\_\_\_

Sling width \_\_\_\_\_

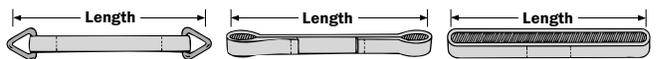
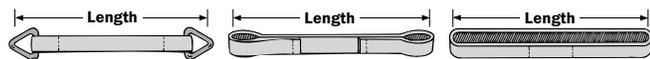
Sling width \_\_\_\_\_

Sling length \_\_\_\_\_

Sling length \_\_\_\_\_

(MEASURE FROM BEARING POINT TO BEARING POINT.)

(MEASURE FROM BEARING POINT TO BEARING POINT.)



Webbing material  NYLON  POLYESTER

Webbing material  NYLON  POLYESTER

SCUFF-EDGE  FLEXI-GRIP

SCUFF-EDGE  FLEXI-GRIP

Grade of material  600 SERIES  900 SERIES

Grade of material  600 SERIES  900 SERIES

\_\_\_\_\_ X \_\_\_\_\_ - \_\_\_\_\_  
QUANTITY LENGTH TYPE PLIES GRADE WIDTH MATERIAL

\_\_\_\_\_ X \_\_\_\_\_ - \_\_\_\_\_  
QUANTITY LENGTH TYPE PLIES GRADE WIDTH MATERIAL

Wear pad description \_\_\_\_\_

Wear pad description \_\_\_\_\_

Wear pad placement \_\_\_\_\_

Wear pad placement \_\_\_\_\_

Coatings \_\_\_\_\_

Coatings \_\_\_\_\_

Other accessories \_\_\_\_\_

Other accessories \_\_\_\_\_

## Warranty

Any warranty, expressed or implied as to quality, performance or fitness for use is always premised on the condition that the published rated capacities apply only to new, unused slings and assemblies, that the mechanical equipment on which such products are used is properly designed and maintained, that such products are properly stored, handled, used and maintained, and properly inspected on a regular basis during the period of use.

Seller shall not be liable under any circumstances for consequential or incidental damages or secondary charges including but not limited to personal injury, labor costs, a loss of profits resulting from the use of said products or from said products being incorporated in or becoming a component of any other product.

**Take a load  
off your mind  
with our synthetic  
web products.**

For more information, call **817-284-2813**

**www.tuffyweb.com**

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Fort Worth, Texas



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