

WHY LIFT-ALL WEB SLINGS?

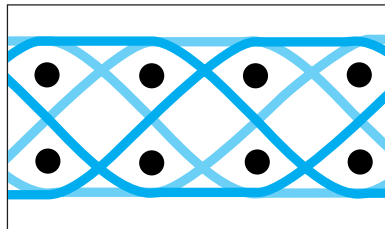
Lift-All web slings meet or exceed OSHA, ASME B30.9 and WSTDA standards and regulations.

All of the sling webbing contained in this catalog is recommended for general purpose lifting. Military webbing, sometimes designated as "Mil-Spec", has not been designed for, nor do we recommend it for general lifting applications.

What is the Difference?

Refer to Mil-Spec Webbing Diagram

- Mil-Spec webbing does not have red core yarn warning system.
- Mil-Spec webbing supports the entire load with exposed surface yarns. *Lift-All* sling webbing uses a combination of internal protected yarns and surface yarns.
- Damage to the surface of Mil-Spec webbing causes greater strength reduction of the webbing.

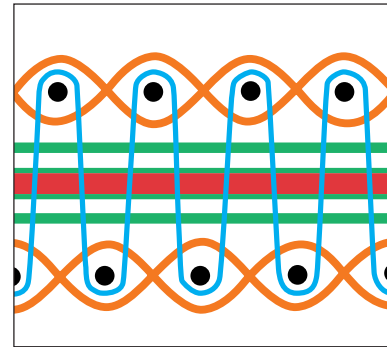


Mil-Spec Webbing

- Combination binder/surface yarns cover each side and carry virtually all of the load.
- Transverse pick yarns inter-relate with binder/surface yarns.

Refer to *Lift-All* Sling Webbing Diagram

- Sling webbing, as shown, has its surface yarns connected from side to side, which not only protect the core yarns, but positions all surface and tensile yarns to work together to support the load.
- Wear or damage to Sling Webbing face yarns cause an immediate strength loss. This is why Sling Webbing has red core yarns to visually reveal damage and act as a basis for sling rejection.



Lift-All Sling Webbing

- Transverse pick yarns inter-relate with binder/surface yarns.
- Woven surface yarns cover each side and carry a portion of the load.
- Strip of longitudinal core yarns bears majority of load.
- Binder yarns secure the surface yarns to web core yarns.
- Red core warning yarns.

ENVIRONMENTAL CONSIDERATIONS

⚠ WARNING

Read Definition on page 3

- Nylon and polyester are seriously degraded at temperatures above 200°F.
- Prolonged exposure to ultraviolet light adversely affects nylon and polyester. Slings become bleached and stiff when exposed to sunlight or arc welding.
- Many chemicals have an adverse effect on nylon and polyester. See Chemical chart (this page).

Chemical Environment Data

General guide only. For specific temperature, concentration and time factors, please consult *Lift-All* prior to purchasing or use.

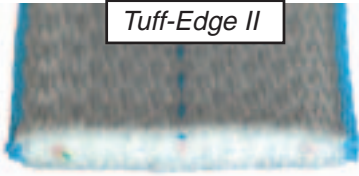
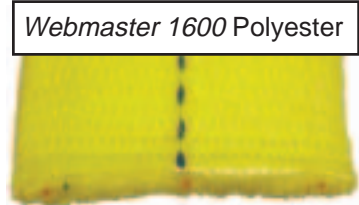
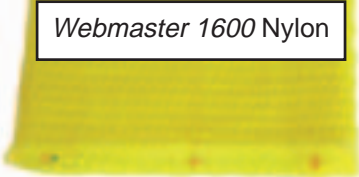
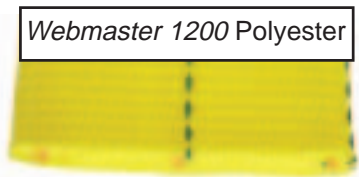
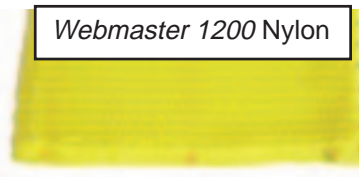
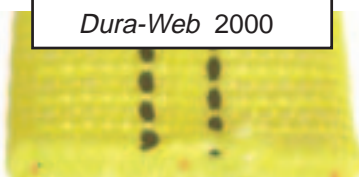
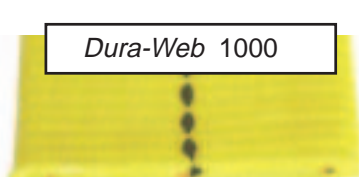
WARNING: These products may contain chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

CHEMICAL	OK	NYLON	POLYESTER
	NO		
Acids			*
Alcohols			
Aldehydes			
Strong Alkalis			**
Bleaching Agents			
Dry Cleaning Solvents			
Ethers			
Halogenated Hydro-Carbons			
Hydro-Carbons			
Ketones			
Oils Crude			
Oils Lubricating			
Soap & Detergents			
Water & Seawater			
Weak Alkalis			

* Disintegrated by concentrated sulfuric acid.

** Degraded by strong alkalis at elevated temperatures.

LIFT-ALL WEB SELECTOR - QUICK COMPARISONS

	Approx. Thickness	Single Ply Rated Capacity Per In. of Width	Available Material	Identify by:	Choose for:
 <p>Tuff-Edge II</p>	3/16"	1600 Lbs.	Polyester	Blue edge Blue center stripe Silver surface	Daily use under good to rugged lifting conditions. Superior edge cut resistance. Our best seller *
 <p>Webmaster 1600 Polyester</p>	3/16"	1600 Lbs.	Polyester	Blue center stripe	Daily use under good to moderate lifting conditions. Polyester stretches less for better load control, reduced abrasion *
 <p>Webmaster 1600 Nylon</p>	3/16"	1600 Lbs.	Nylon	No center stripe	Daily use under good to moderate lifting conditions. Nylon stretches more to help avoid shock loading.*
 <p>Webmaster 1200 Polyester</p>	1/8"	1200 Lbs.	Polyester	Blue center stripe Black yarn one edge	Less frequent use under good lifting conditions. Polyester stretches less for better load control, reduced abrasion.*
 <p>Webmaster 1200 Nylon</p>	1/8"	1200 Lbs.	Nylon	No center stripe Black yarn on edge	Less frequent use under good lifting conditions. Nylon stretches more to help avoid shock loading.*
 <p>Dura-Web 2000</p>	5/16"	2000 Lbs.	Nylon	Two black center stripes	Heavy use under moderate to rugged lifting conditions. Abrasion resistant yarns cover entire surface.*
 <p>Dura-Web 1000</p>	3/16"	1000 Lbs.	Nylon	One black center stripe	Daily use under moderate lifting conditions. Abrasion resistant yarns cover entire surface.*

* **WARNING** Always use Wear Pads to protect synthetic slings from being cut by load edges.(See Page 123 for Wear Pad information)

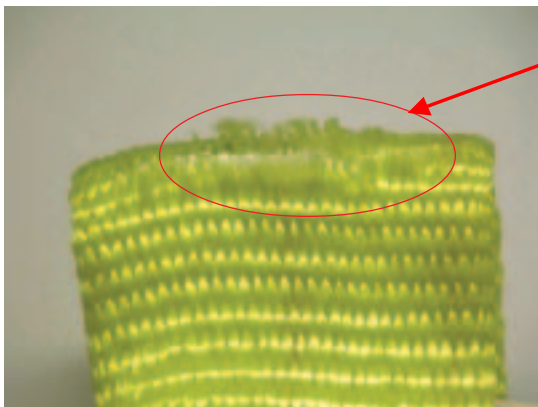
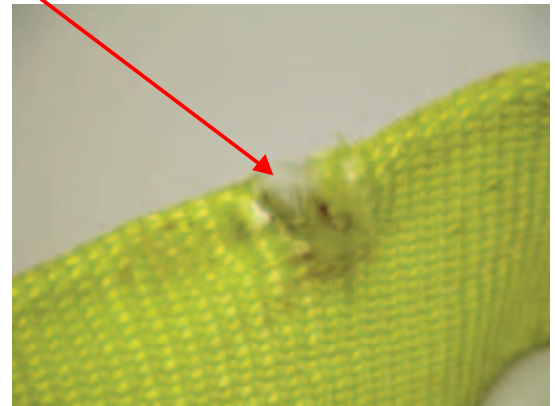
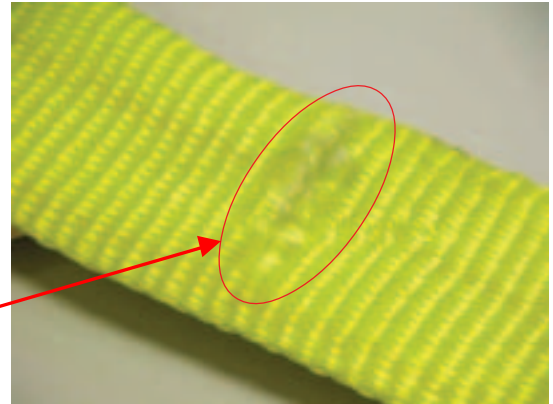
INSPECTION CRITERIA FOR WEB SLINGS

All slings should be inspected for damage prior to each use to assure that their strength has not been compromised. The following photos illustrate some of the common damage that occurs to indicate that the sling should be taken out of service.

THE DAMAGE: Surface and Edge Cuts - It is important to realize that all of the fibers in web slings contribute to the strength of that sling. When there have been a significant number of fibers broken in a web sling, as shown here, that sling should be taken out of service.

WHAT TO LOOK FOR: Broken fibers of equal length indicate that the sling has been cut by an edge. **Red core warning yarns** may or may not be visible with cuts and are not required to show before removing slings from service.

TO PREVENT: Use **wear pads** (see page 123) between the sling and all edges that come in contact with the sling.



THE DAMAGE: Holes/Snags/Pulls

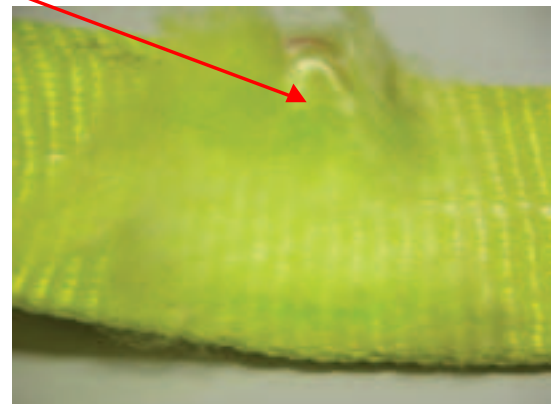
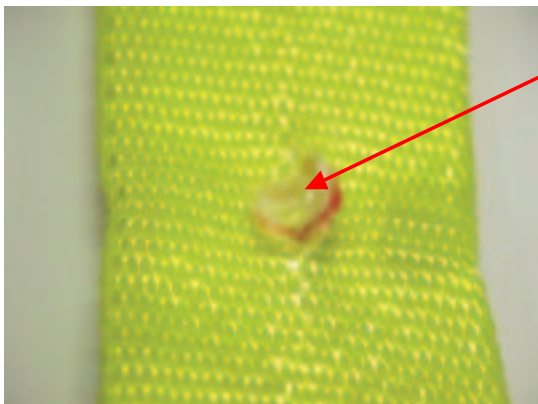
WHAT TO LOOK FOR: Punctures or areas where fibers stand out from the rest of the sling surface.

TO PREVENT: Avoid sling contact with protrusions, both during lifts and while transporting or storing.

THE DAMAGE: Abrasion

WHAT TO LOOK FOR: Areas of the sling that look and feel **fuzzy** indicate that the fibers have been broken by being subject to contact and movement against a rough surface. Affected areas are usually stained.

TO PREVENT: Never drag slings along the ground. Never pull slings from under loads that are resting on the sling. Use wear pads between slings and rough surface loads.

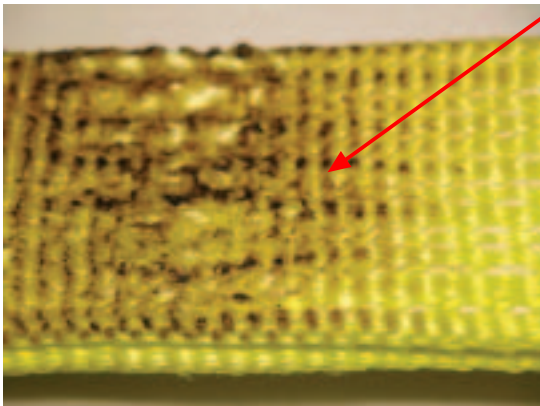


INSPECTION CRITERIA FOR WEB SLINGS

THE DAMAGE: **Heat/Chemical**

WHAT TO LOOK FOR: Melted or charred fibers anywhere along the sling. Heat and chemical damage can look similar and they both have the effect of damaging sling fibers and compromising the sling's strength. Look for discoloration and/or fibers that have been fused together and often feel hard or crunchy.

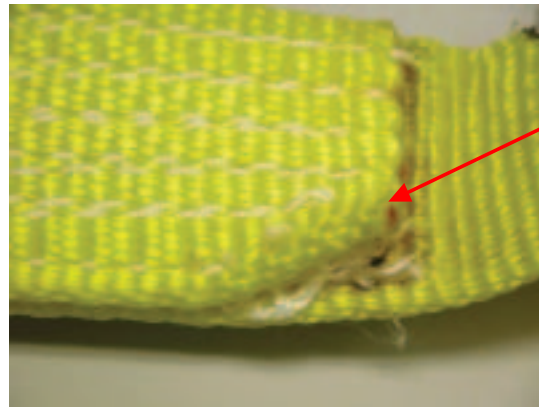
TO PREVENT: Never use nylon or polyester slings where they can be exposed to temperatures in excess of 200° F. Never use nylon or polyester slings in or around chemicals without confirming that the sling material is compatible with the chemicals being used.



THE DAMAGE: Broken/Worn Stitching in the main stitch patterns of web slings has a direct adverse effect on the strength of a sling. The stitch patterns in web slings have been engineered to produce the most strength out of the webbing. If the stitching is not fully intact, the strength of the sling may be affected.

WHAT TO LOOK FOR: Loose or broken threads in the main stitch patterns.

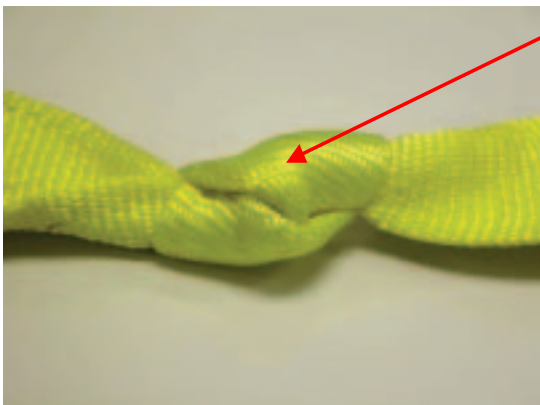
TO PREVENT: Never pull slings from beneath loads where stitch patterns can get hung up or snagged. Never overload the slings or allow the load edge to directly contact the stitch pattern while lifting. Never place a sling eye over a hook or other attachment whose width/diameter exceeds 1/3 the eye length.



THE DAMAGE: Knots compromise the strength of all slings by not allowing all fibers to contribute to the lift as designed. Knots may reduce sling strength by up to 50%.

WHAT TO LOOK FOR: Knots are rather obvious problems as shown below.

TO PREVENT: Never tie knots in slings and never use slings that are knotted.



THE DAMAGE: Illegible or Missing Tags- The information provided by the sling tag is important for knowing what sling to use and how it will function.

WHAT TO LOOK FOR: If you cannot find or read all of the information on a sling tag, OSHA requires that the sling shall be taken out of service.

TO PREVENT: Never set loads down on top of slings or pull sling from beneath loads if there is any resistance. Load edges should never contact sling tags during the lift. Avoid paint or chemical contact with tags.



Red Core Yarns - are an **additional** warning of dangerous sling damage. All standard *Lift-All* Web Slings have this warning feature. When red yarns are visible, the sling should be removed from service immediately. The red core yarns become exposed when the sling surface is cut or worn through the woven face yarns. For other inspection criteria see OSHA/Manufacturer regulations on pages 6 through 8.

STANDARD WEB SLING TYPES

Hardware Slings

Unilink and *Web-Trap* hardware can help to extend sling life by protecting the webbing from abrasion on rough crane hooks. Hardware can often be reused, lowering sling replacement costs.

Type U (UU) - Has the preferred and economical *Unilink* fitting on each end for use in a vertical, choker or basket hitch. *Unilinks* allow choking from either end to save time and vary wear points. See page 22.

Type 1 (TC) - Has a *Web-Trap* triangle and choker fitting on either end. Typical use is in a choker hitch. Can also be used in vertical and basket hitches.

Type 2 (TT) - Has a *Web-Trap* triangle on each end. Normally used in a basket hitch, but can also be used in a vertical hitch. They cannot be used as a choker.

Eye Type

Type 3 (EE) - Flat Eye slings are very popular and can be used in all three types of hitches. They are easier to remove from beneath the load than sling types 1, 2 and 4. Unless type 4 is requested, type 3 will be supplied as the standard EE sling.

Type 4 (EE) - Twisted Eye slings are similar to Type 3 except the eyes are turned 90° to form a better choker hitch. The eyes of a Type 4 nest better on the crane hook.

Endless Type

Type 5 (EN) - Endless slings are versatile and the most economically priced. They can be used in all three types of hitches. The sling can be rotated to minimize wear. The sling legs can be spread for improved load balance.

Reverse Eye Type

Type 6 (RE) - An endless sling with butted edges sewn together to double the sling width. They have reinforced eyes and wear pads on both sides of body and eyes. The result is an extremely strong and durable sling.



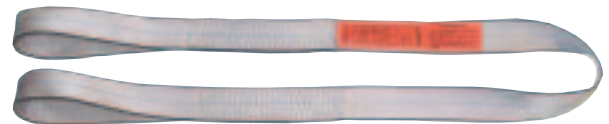
Type U



Type 1



Type 2



Type 3



Type 4



Type 5



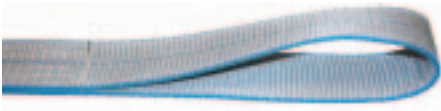
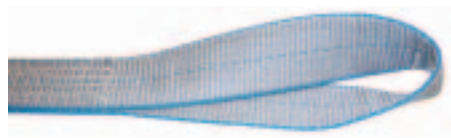






Type 6

WEB SLING EYE TREATMENTS

Eye Wear Pads - The eyes of web slings are often subjected to the harsh treatment of rough crane hooks. Specialty eye treatments are available to help reduce the wear in that area, thereby extending sling life. The following photos illustrate the more common eye treatments using wear resistant webbing in various forms. Should you want non-standard eye treatment on your eye & eye web slings, please specify using the terminology below.

Type 3 - Flat Eyes

Type 4 - Twisted Eyes

F		Standard Style	T	
G		Lined Bearing Point	U	
H		Fully Lined Eye	V	
I		Wrapped Bearing Point	W	

Textured nylon wear resistant webbing is standard for these eye treatments
Other wear pad materials are available (see page 123).

Tapering Eyes - As a standard practice, the eyes, or bearing points of sling Types 3 and 4 are tapered to accommodate a crane hook on slings that are 3" and wider. Untapered eyes are available upon request. Type 5 (Endless) slings are NOT tapered unless specified on order. Dura-Web 2000 slings are not tapered in any width.



Type 3 Flat Eyes



Type 4 - Twisted Eyes



Type 5 - Endless

WEB INFORMATION

Sling Length Tolerance for Web Slings

Sling Type	Tolerance *
1 Ply	1.5" +1.5 % of sling length
2 Ply	2.0" + 2 % of sling length
3 & 4 Ply	3.0" + 3 % of sling length

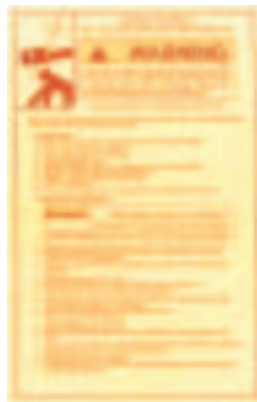
* For web sling widths wider than 6", add 1/2" to these values. For tighter tolerance or matched set length requirements, please consult with Customer Service.

Tuff-Tag and Warning Sheet



OSHA requires all web slings to show rated capacities and type of material. The *Lift-All Tuff-Tag* is made from an abrasion resistant polymer that will remain legible far longer than any leather or vinyl tags. In fact, a *Tuff-Tag* will consistently outlast the useful life of a sling.

A Warning Sheet is included with every web sling order from *Lift-All*. The sheet lists inspection information and operating practices applying to synthetic web slings.



Anti-Abrasion Treatment

Lift-All recommends that web slings be manufactured from abrasion resistant latex treated webbing. Treatment is standard on both nylon and polyester web slings. Natural, untreated webbing is available upon request.

Note: Heavy duty treatments are available as a supplemental process for greater protection.

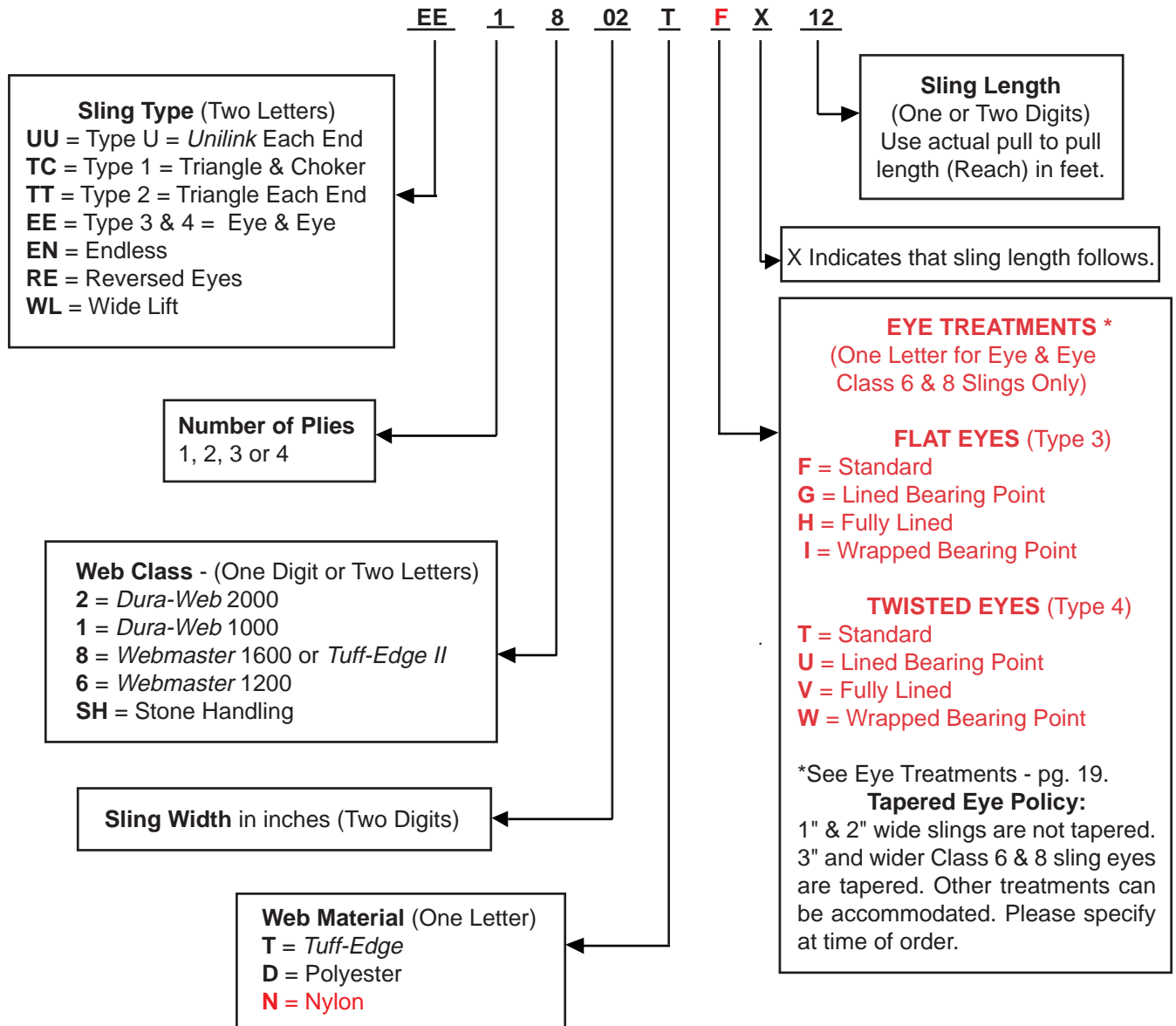
Elasticity - The stretch characteristics of web slings depends on the type of yarn and the web finish. Approximate stretch at RATED SLING CAPACITY is:

NYLON		POLYESTER	
Treated	10%	Treated	7%
Untreated	6%	Untreated	3%

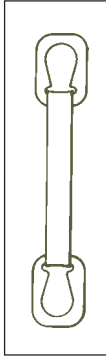
Prior to sling selection and use, review and understand the "Help" section.

HOW TO ORDER

We have revised our web sling code to better define the product you are ordering. Changes to our previous web sling code are shown below in red.



WEB SLING WEIGHTS (Approx.)*



Type U (UU)

Part No.	Minimum Standard Length		Add'l. Ft.
	Ft.	Wt.** (Lbs.)	Wt. (Lbs.)

Unilink Style

UU1802	3	2.7	0.12
UU1803	3	5.6	0.18
UU1804	4	9.2	0.24
UU1802	3	2.9	0.25
UU1803	3	5.8	0.38
UU1804	3	9.2	0.50

Triangle & Choker Style



TC1802	3	3.5	0.12
TC1803	3	6.3	0.18
TC1804	4	9.0	0.24
TC1806	4	21	0.36
TC1808	5	27	0.48
TC1810	5	48	0.60
TC1812	6	65	0.72
TC2802	3	3.6	0.25
TC2803	3	6.5	0.38
TC2804	3	9.1	0.50
TC2806	4	21	0.76
TC2808	4	39	1.0
TC2810	5	63	1.3
TC2812	5	86	1.5

Triangle & Triangle Style



TT1802	3	2.6	0.12
TT1803	3	4.6	0.18
TT1804	3	6.7	0.24
TT1806	4	15	0.36
TT1808	5	19	0.48
TT1810	5	36	0.60
TT1812	5	44	0.72
TT2802	3	2.7	0.25
TT2803	3	4.8	0.38
TT2804	3	7.0	0.50
TT2806	3	15	0.76
TT2808	4	28	1.0
TT2810	4	46	1.3
TT2812	5	60	1.5

* Weights will vary. Published weights are average weights for Webmaster 1600 slings.

** Approximate weight for the minimum standard length as shown.



WEB SLING WEIGHTS (Approx.)*



Type 3 (Flat Eye)



Type 4 (Twisted Eye)



Type 5

Eye & Eye Style

	Minimum Standard Length		Add'l. Ft.
	Ft.	Wt.** (Lbs.)	Wt. (Lbs.)
EE1801	3	0.4	0.06
EE1802	4	0.9	0.12
EE1803	4	1.4	0.18
EE1804	4	1.9	0.24
EE1805	5	2.7	0.30
EE1806	5	3.4	0.36
EE1808	6	5.3	0.48
EE1810	8	8.0	0.60
EE1812	8	9.8	0.72
EE2801	3	0.4	0.13
EE2802	3	0.9	0.25
EE2803	4	1.7	0.38
EE2804	4	2.3	0.50
EE2805	5	3.5	0.63
EE2806	6	4.9	0.76
EE2808	6	6.5	1.0
EE2810	7	9.4	1.3
EE2812	8	13	1.5
EE3801	4	1.0	0.20
EE3802	4	2.1	0.40
EE3803	5	3.7	0.59
EE3804	5	5.0	0.79
EE3805	5	6.3	0.99
EE3806	5	7.6	1.2
EE3808	7	13	1.6
EE3810	7	16	2.0
EE3812	7	20	2.4
EE4801	4	1.1	0.26
EE4802	4	2.2	0.53
EE4803	5	4.1	0.79
EE4804	5	5.5	1.1
EE4805	5	6.9	1.3
EE4806	5	8.3	1.6
EE4808	7	15	2.1
EE4810	7	19	2.6
EE4812	7	23	3.2

Endless Style

	Minimum Standard Length		Add'l. Ft.
	Ft.	Wt.** (Lbs.)	Wt. (Lbs.)
EN1801	3	0.4	0.12
EN1802	3	0.8	0.24
EN1803	3	1.3	0.36
EN1804	3	1.7	0.48
EN1805	3	2.1	0.60
EN1806	3	2.5	0.72
EN1808	3	3.4	0.96
EN1810	3	4.2	1.2
EN1812	3	5.0	1.4
EN2801	3	0.8	0.25
EN2802	3	1.6	0.50
EN2803	3	2.5	0.76
EN2804	3	3.3	1.0
EN2805	3	4.1	1.3
EN2806	3	4.9	1.5
EN2808	3	6.6	2.0
EN2810	3	8.2	2.5
EN2812	3	9.9	3.0
EN3801	3	1.2	0.38
EN3802	3	2.4	0.76
EN3803	3	3.6	1.1
EN3804	3	4.8	1.5
EN3805	3	6.0	1.9
EN3806	3	7.2	2.3
EN3808	3	9.6	3.0
EN3810	3	12	3.8
EN3812	3	14	4.5
EN4801	3	1.6	0.52
EN4802	3	3.2	1.0
EN4803	3	4.9	1.6
EN4804	3	6.5	2.1
EN4805	3	8.1	2.6
EN4806	3	9.7	3.1
EN4808	3	13	4.2
EN4810	3	16	5.2
EN4812	3	19	6.2

* Weights will vary.
Published weights are average weights for Webmaster 1600 slings.

** Approximate weight for the minimum standard length as shown.



WEB SLING WEIGHTS (Approx.)*

Attached Eye Wide-Lift

Part No.	10 Ft. Sling Wt. (lbs.)	Add'l. Ft. Wt. (lbs.)
WLA1806	3.8	0.36
WLA1808	4.9	0.48
WLA1812	6.2	0.72
WLA1816	9.5	1.1
WLA1820	12	1.3
WLA1824	14	1.6
WLA2806	4.2	0.36
WLA2808	5.4	0.48
WLA2812	7.4	0.72
WLA2816	12	1.1
WLA2820	15	1.3
WLA2824	16	1.6
WLA2830	17	2.0
WLA2836	17	2.4
WLA2848	20	3.2

Continuous Eye Wide-Lift

Part No.	10 Ft. Sling Wt. (lbs.)	Add'l. Ft. Wt. (lbs.)
WL1806	5.8	0.54
WL1808	7.1	0.66
WL1812	9.7	0.90
WL1816	12	1.1
WL1820	15	1.4
WL1824	17	1.6
WL1830	23	2.2
WL1836	27	2.5
WL2806	9.4	0.9
WL2808	12	1.1
WL2812	17	1.6
WL2816	22	2.1
WL2820	27	2.6
WL2824	31	3.0
WL2830	41	4.0
WL2836	48	4.6

* Weights will vary.
 Published weights are
 average weights using
 Webmaster 1600 webbing.