

liftex[®]
the world's best slings



The most trusted name in slings since 1955

Your Authorized Liftex Distributor:

McLAUGHLIN HOIST & CRANE

(636)343-9700

www.StLCrane.com

lifutex® Past, Present and Future

Known industry wide as the originator of the synthetic web sling, **lifutex®** offers an extensive line of lifting slings and cargo control solutions to the industrial supply and rigging industries.

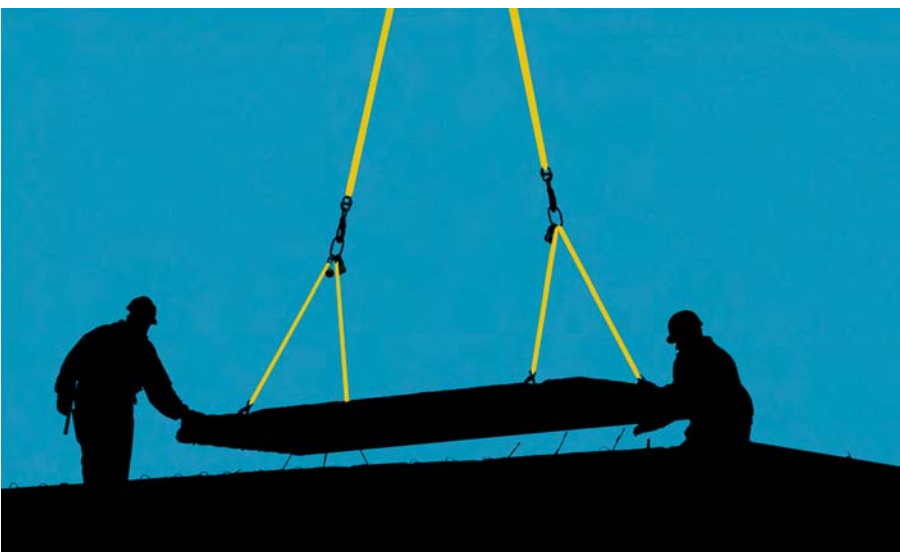
Backed by over 50 years of experience in manufacturing the highest quality slings available anywhere, and with 5 manufacturing facilities and over 300 distributors across the country and around the globe, Lifutex® offers you fast and efficient service when and where you need it.

From our humble beginnings with our Philadelphia and Chicago locations in 1955, Lifutex® has expanded across the country and around the world. With the addition of wholly owned manufacturing and warehousing facilities in Houston, TX, Seattle, WA and Kunshan, PRC – Lifutex® has established and implemented procedures and protocols across all of our facilities to meet or exceed industry standards.

Over the last half century we have kept our goals simple: We exist to serve the lifting industry with dedication to service, quality and performance.

Whether your need is a standard product or a “special” sling designed to meet a specific application, Lifutex® is your primary source. Service, quality and performance are the Lifutex® guarantees.

Synthetic web, roundslings, chain slings, specialty slings, engineering and design services – whatever your lifting application, when you are looking for a lifting sling solution, make certain that it has the Lifutex® tag.



Contact Information

liftex® exists to serve the lifting industry and our customers with products and services developed in an environment that places maximum focus on safety, quality, innovation, performance, integrity and value. It is with these core traits as pillars that we have built our history and our success, and on which we will continue to build our position as the industry leading source for lifting solutions.

EMAIL

Inquiries & Sales
Sales@StLCrane.com

For more information, please contact your authorized distributor below:



McLaughlin Hoist & Crane
1850 Larkin Williams Rd.
Fenton, MO 63026

Tel (636) 343-9700
Fax (636) 343-0840
Email Sales@StLCrane.com
Web www.StLCrane.com

Sling Selection

Which sling type is best for your application?

All slings manufactured or provided by **lifetex®** meet or exceed OSHA, WSTDA standards and regulations. With a very few limited exceptions (primarily due to hardware/fitting marking requirements) **lifetex®** products are also compliant with ASME B30.9 standards and regulations.



PRO-EDGE® AND HDP™ WEB SLINGS:

- Soft and flexible – will not mar, scratch or deface “sensitive” loads
- Light weight, easy to handle and store
- Adjusts to load contour providing tight, non-slip grip
- Non-sparking



ROUNDUP™ ROUNDSLINGS:

- All the attributes of Web Slings plus:
- Soft and flexible – ideal for choker hitch applications
 - Cover abrasion will not reduce capacity
 - Provides a strong grip on loads
 - Capacities are color coded



PAC-LINK™ ALLOY CHAIN SLINGS:

- Best combination of handling, strength and durability
- For use in high abrasion, high cut-potential, high temperature applications



PAC-FLEX™ ALLOY CHAIN MESH SLINGS:

- All the attributes of PAC-Link™ - plus:
- Mesh construction provides a larger capacity and wider load-bearing surface for increased load control and stability in a basket hitch
 - PAC-Flex™ Chain mesh provides greater capacity and better performance than wire mesh slings

Lifting and Safety Info Resources

All slings manufactured or provided by **lifetex**® meet or exceed OSHA, WSTDA standards and regulations. With a very few limited exceptions (primarily due to hardware/fitting marking requirements) **lifetex**® products are also compliant with ASME B30.9 standards and regulations.

RESOURCES FOR SLING SAFETY/USE INFORMATION:

- U.S. Department of Labor O.S.H.A.: (800)-321-OSHA (6742)
- National Safety Council: (800) 621-7615
- Commercial Vehicle Safety Association: (301)-830-6143
- American Society of Mechanical Engineers: (800) 843-2763 (U.S./Canada)
- Associated Wire Rope Fabricators: (800) 444-2973
- Web Sling & Tie Down Association: (443) 640-1070 ext. 110

Additional Resources

Additional resources to ensure that you are properly trained and knowledgeable regarding the safety and use of synthetic slings include, but are not limited to:

- WSTDA-WS-1: Recommended Standard Specifications for Synthetic Web Slings
- WSTDA-RS-1: Recommended Standard for Synthetic Polyester Roundslings
- WSTDA-T-1: Recommended Standard for Synthetic Web Tie Downs
- ASME B30.9: Synthetic Webbing Slings: Selection, Use and Maintenance
- OSHA 29 CFR 1910.184 – Slings
- Rigging Handbooks
- OSHA Guidance on Safe Sling Use.
- Formal training provided by manufacturer or outside entities.

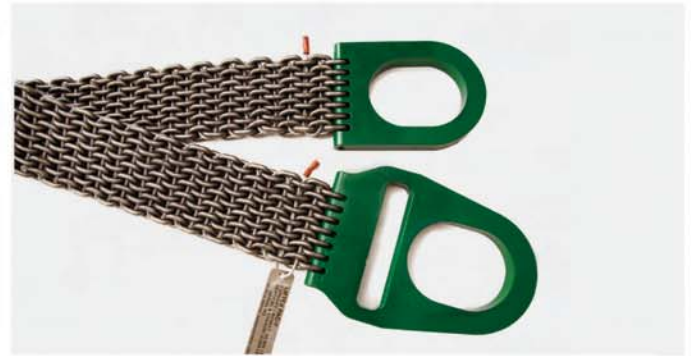


lifetex® Warranty Information

Lifetex® warrants its products are free from defects in material and workmanship under normal consumer usage for the first twelve (12) months of said product's purchase. Lifetex's sole obligation under this warranty, chosen at its sole discretion, shall be limited to the repair, replacement, or refund of the purchase price of any product that does not conform with this warranty. This limited warranty is a buyer's exclusive remedy; applies only to new products; and does not apply to any defect caused by normal wear and tear, accident, and/or products that have been modified, repaired or misused. The amount of Lifetex's liability arising out of the sale or use of its products solely shall be limited to the purchase price of said product. Repairs or modifications authorized by Lifetex® neither extend nor void this limited warranty.

ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY LIFTEX® AND ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND REPRESENTATIVES. PURCHASER HEREBY WAIVES ALL OTHER WARRANTIES, RIGHTS AND REMEDIES ARISING BY LAW OR OTHERWISE INCLUDING, BUT NOT LIMITED TO, EXPRESS WARRANTIES, THE IMPLIED WARRANTY OF MERCHANTABILITY, ANY IMPLIED WARRANTIES ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE, AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, LIFTEX® CORPORATION HEREBY DISCLAIMS ANY OF ITS OBLIGATIONS OR LIABILITIES ARISING FROM STATUTE, WARRANTY CONTRACT, TORT OR NEGLIGENCE.

Complete Agreement: This Warranty between purchaser and Lifetex® Corporation is complete. All prior or contemporaneous discussions, representations and/or understandings are merged into this warranty. All prior or contemporaneous agreements between parties are superseded by this warranty.



Safety First

At **liftext®** safety is our top priority and the paramount consideration involved in manufacturing **liftext®** slings. It is the responsibility of the user of our slings to establish appropriate safety practices prior to using our slings. Users of slings shall have knowledge on proper methods of rigging and lifting and how they will react under abnormal situations.

All slings manufactured or provided by liftext® meet or exceed OSHA, WSTDA standards and regulations. With a very few limited exceptions (primarily due to hardware/fitting marking requirements) liftext® products are also compliant ASME B30.9 standards and regulations.

NEVER USE A SLING WITHOUT TRAINING:

OSHA regulations require responsible work practice. Employee training should include information given in OSHA training literature, ASME B30.9 "Slings" and ASME B30.10 "Hooks" safety standard stating that sling users shall be trained in the selection, inspection, cautions to personnel, effects of the environment, and rigging practices.

ALWAYS COMPLY WITH APPLICABLE FEDERAL AND LOCAL REGULATIONS:

Understand all governing laws and safety standards before use of Liftext Slings. OSHA 1910.184; OSHA 1910.5 (c) (1); ASME B 30.9 "Sling" Safety Standards provide important information.

ALWAYS INFORM YOURSELF:

Ask your employer for all sling safe use instruction.

NEVER USE ANY SLING IN EXTREME TEMPERATURES:

Please refer to www.liftext.com for more details on how extreme heat may affect slings. All sling materials have different tolerance. Be sure to find the correct temperatures for your particular sling.

NEVER OVERLOAD A SLING:

Understand work load limits and rated capacities. Rated capacities are based on a 5:1 design factor for synthetics and 4:1 for chain slings. Lift dynamics, duty cycle and hitch type may require an increased design factor, hence a reduced WLL. Sling WLL depends on sling leg angle. The WLL for a sling is reduced as the sling leg angle with the horizontal gets smaller. This fact applies to all multi-leg and basket slings and must not be ignored. Pages 16 and 17 illustrate the effect of sling leg angle on WLL for a single basket and 2-leg sling. The WLL of a sling with a 30 degree leg angle is 50% of the WLL for the same sling with a 90 degree leg angle. Inattention to the effect of the sling leg angle can result in sling overload. When using chain sling as opposed to synthetics the WLL must be reduced in accordance to page 43 when chain is rigged over an edge radius (R) less than 2x the chain rod diameter (d).

ALWAYS KNOW THE LOAD WEIGHT:

Avoid sling failure. Utilize table on pages 17 and 43 to determine proper sling configuration and work load limits.

ALWAYS BE AWARE OF CHEMICALLY ACTIVE ENVIRONMENTS:

Chemically active environments can affect the strength of webbing and chain in varying degrees, ranging from little to total degradation. Before ordering and/or using slings that will be used in a chemically active environment, contact a Liftext® representative. We will be pleased to recommend the right sling for the application.

ACIDS:

Nylon is subject to degradation in acids, ranging from little to total degradation. Polyester is resistant to many acids, but is subject to degradation, ranging from little to moderate in some acids. Chain is subject to degradation in acids. Degradation may or may not be visible. If chain has been exposed to acids it should be removed from service.

Each application shall be evaluated, taking into consideration the following:

- Type of Acid
- Exposure Conditions
- Concentration
- Temperature

ALKALIS:

Nylon is resistant to many alkalis, but is subject to degradation ranging from little to moderate in some alkalis. Polyester is subject to degradation in alkalis, ranging from little to total degradation. Chain is subject to degradation in alkalis. Degradation may or may not be visible. If chain has been exposed to alkalis it should be removed from service.

Each application shall be evaluated, taking into consideration the following:

- Type of Alkali
- Exposure Conditions
- Concentration
- Temperature

NEVER RIDE A SLING OR LOAD:

Additionally synthetic slings should never be used to rig personnel platforms.



NEVER RIG A SLING TO LOAD IMPROPERLY:

Avoid dropped loads or sling damage:

- Sling leg angle shall not be less than 30 degrees from the horizontal
- Chain Slings shall be shortened with a shortening hook only- NO KNOTS, BOLTS, ETC.
- Synthetic Slings are not to be shortened at all- if a shorter sling is needed for a job use a different sling that is properly suited for the application
- Sling legs shall not be kinked, twisted or tied
- Sling hooks shall not be point loaded
- Slings used in a basket hitch shall have loads properly balanced
- Slings shall be securely attached to lifting point
- Slings shall be padded or protected from load edges
- Sling shall be rigged to prevent chain from sliding over load edge radius

NEVER USE A WORN OUT OR DAMAGED SLING:

Remove slings from service if any of the following are present:

- Missing or illegible identification
- Wear, nicks, bends, cracks, gouges, or stretching in any hardware or chain
- Weld splatter on any part of the sling or hardware attachments
- Excessive wear at bearing points
- Discoloration from excessive temperatures
- Chain links should hinge freely with adjacent links
- End attachments, including hooks, that are cracked, deformed, elongated, or obviously worn
- Other conditions, including visible damage, that cause doubt as to the continued use of the sling

NEVER USE A SLING WITHOUT A LEGIBLE IDENTIFICATION TAG:

Sling identification is required to insure proper sling selection. Rated capacity is the maximum working load for a specified working range. Slings with missing or illegible tags should be removed from service. Sling working range includes sling leg angles from 90 degrees to specified maximum.

CAUTIONS TO PERSONNEL:

All portions of the human body shall be kept from between the sling and the load, and from between the sling and the crane hook or hoist hook. Personnel should never stand in line with or next to the leg(s) of a sling that is under tension. Personnel shall not stand or pass under a suspended load. Personnel shall not ride the sling. Synthetic slings shall not be used as bridles on a suspended personnel platform.

	WARNING
	SLING FAILURE CAN CAUSE DEATH OR INJURY
	SLING FAILURE RESULTS FROM MISUSE, DAMAGE, AND EXCESSIVE WEAR
ADHERE TO INDUSTRY STANDARDS & REGULATIONS	

General Inspection Procedures

FOR COMPLETE INDUSTRY STANDARDS REFER TO:

- OSHA
- ASME B30.9
- WSTDA Recommended Standard Specifications

GENERAL OVERVIEW, INDUSTRY GUIDELINES AND LIFTEX® RECOMMENDATIONS FOR SLING INSPECTIONS

FREQUENCY OF INSPECTION:

Initial: Before any new or repaired sling is placed into service, it shall be inspected by a designated person to ensure that the correct sling is being used, as well as to determine that the sling meets the requirements of industry specifications.

Frequent: A visual inspection shall be performed by the user or designated person prior to each use of a sling.

Periodic: A complete inspection for damage shall be performed periodically by a designated person. Frequency of periodic inspection is based on frequency of use, severity of service conditions, experience gained on the service life of slings used in similar applications. At minimum, frequency of periodic inspection shall be annual.

DOCUMENTATION:

Written or electronic records of periodic inspections shall be maintained for each individual sling.

REPAIRS:

Lifutex® strongly advises that slings displaying damage and subject to repair be evaluated by the manufacturer for suitability of said repairs. Damaged flat web slings should never be repaired. Hardware from damaged web or round-slings may, subject to inspection of said hardware, may be salvaged and re-webbed. Damaged components, sections or links of chain slings often times can be replaced and the sling put back into service. Any repairs shall be evaluated and performed by the manufacturer. Any repaired sling shall be proof-tested and documented prior to being put back into service.

GENERAL REJECTION CRITERIA PER ASME B30.9;

– APPLIES TO ALL SLING TYPES

- Missing or illegible sling identification
- Evidence of heat damage
- Slings that are knotted
- Fittings that are pitted, corroded, bent, twisted or broken
- Any visible characteristic that would indicate damage or cause doubt as to functionality and/or integrity of the sling

SEE PAGES 56 THROUGH 59 FOR BLANK INSPECTION FORMS.

Specific Removal Criteria for Flat Web Slings

The web sling shall be removed from service if any of the following are visible:

- Missing or illegible tag
- Acid or caustic burns
- Melting or charring of any part of the sling
- Holes, tears, cuts, snags or embedded articles
- Broken or worn stitching in load bearing splices
- Excessive abrasive wear
- Knots in any part of the sling
- Discoloration and brittle or stiff areas on any part of the sling, which may indicate chemical or ultraviolet/sunlight damage
- Fittings that display excessive pitting, corrosion, or are cracked, bent, twisted, gouged or broken
- For hooks – see ASME B30.10 for removal criteria
- For fittings – see ASME B30.26 for removal criteria
- Other conditions and/or visible damage that cause doubt as to the continued use of the sling.

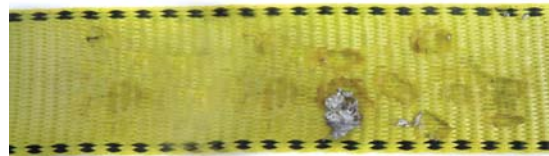
EXAMPLES OF WEB SLINGS TO BE REMOVED FROM SERVICE:

See page 56 for inspection form.

SLING KNOT



SLING WELD SPLATTERS



SLING CUTS



SLING ABRASION



SLING FRAYS AND PULLS



SLING ACID BURN



*CONTACT A LIFTEX® REPRESENTATIVE OR DISTRIBUTOR WITH ANY SAFETY CONCERNS PRIOR TO USE. EACH IMAGE IS ONLY ONE EXAMPLE OF EACH TYPE OF DAMAGE.

Specific Removal Criteria for RoundSlings

The roundsling shall be removed from service if any of the following are visible:

- Missing or illegible tag
- Acid or caustic burns
- Evidence of heat damage
- Melting, charring or weld splatters are present on any part of the roundsling
- Holes, tears, cuts, snags or embedded articles
- Broken or worn stitching in the cover which exposes core fibers
- Broken or damaged core yarn
- Excessive abrasive wear
- Knots in any part of the sling
- Discoloration, brittle or stiff areas on any part of the sling, which may indicate chemical, heat, or ultraviolet/sunlight damage
- Fittings that display excessive pitting, corrosion, or are cracked, bent, twisted, gouged or broken
- For hooks – see ASME B30.10 for removal criteria
- For fittings – see ASME B30.26 for removal criteria
- Other conditions and/or visible damage that cause doubt as to the continued use of the sling

EXAMPLE OF ROUNDSLINGS TO BE REMOVED FROM SERVICE:

See page 56 for inspection form.

ROUNDSLING CUTS



ROUNDSLING ABRASION



ROUNDSLING TEARS AND PULLS



ROUNDSLING ACID BURN



ROUNDSLING WELD SPLATTER



ROUNDSLING BURN



*EACH IMAGE IS ONLY ONE EXAMPLE OF EACH TYPE OF DAMAGE.

Specific Removal Criteria for Chain Slings

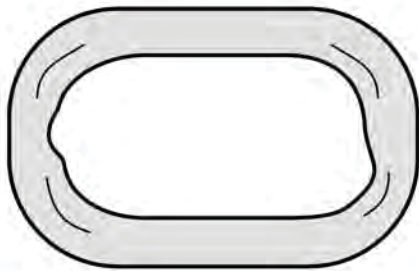
The chain sling shall be removed from service if any of the following are visible:

- Missing or illegible tag
- Cracked or broken links or hardware
- Excessive wear, nicks or gouges
- Stretched links or fittings
- Bent, twisted or deformed links or fittings
- Excessive pitting or corrosion
- Lack of ability of chain or components to hinge freely
- Weld splatter
- Knots in any part of the sling
- Discoloration on any part of the sling, which may indicate chemical damage
- Fittings that display excessive pitting, corrosion, or are cracked, bent, twisted, gouged or broken
- For hooks – see ASME B30.10 for removal criteria
- For fittings – see ASME B30.26 for removal criteria
- Other conditions and/or visible damage that cause doubt as to the continued use of the sling

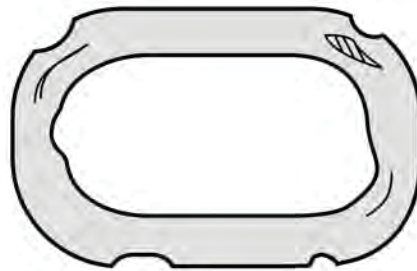
See pages 57 and 58 for inspection forms.

EXAMPLES OF CHAIN SLINGS TO BE REMOVED FROM SERVICE:

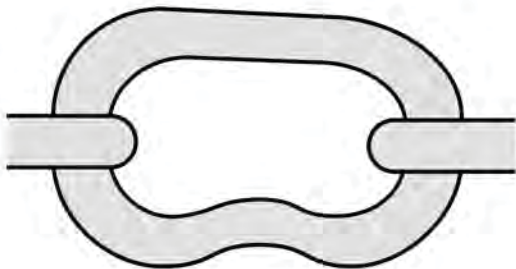
WORN LINKS



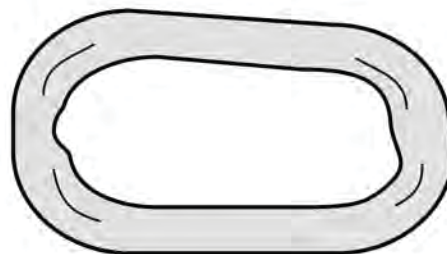
GOUGED LINKS



BENT LINKS



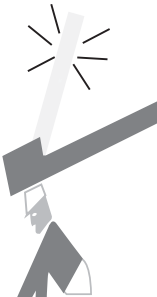

STRETCHED LINKS



*ANY REPAIRS TO DAMAGED SLINGS SHOULD ONLY BE PERFORMED BY ORIGINAL MANUFACTURER.

Recommended Operating Practices

- All users must be trained and knowledgeable in sling selection, use and inspection of slings, cautions to personnel, environmental factors and rigging practices.
- Know the weight of your load.
- Use a sling with characteristics meant for the type of load, hitch and environment with which you are working.
- Never ride a sling or load.
- Never load a sling in excess of its rated capacity. Always consider working load limit reduction factors such as angle and/or tension.
- Never tie or knot a sling, or use a sling with a knot in it.
- Protect the sling from being cut by corners, edges and abrasive surfaces by using wear pads or sleeves of sufficient strength to prevent damage to sling.
- Make sure the sling is securely attached to the lifting point.
- Do not stand near or under a suspended load and keep it clear of other obstructions.
- Do not drag a sling across the floor, over abrasive surfaces, or from under a load.
- Don't shock (jerk) load when lifting.
- Take damaged slings out of service immediately.
- Liftext® always recommends synthetic slings be protected by appropriate wear protection:
 - Sewn-On Wear Pads
 - Sliding Sleeves
 - Quick Sleeves
 - Edge Wrap
 - Eye Buffers
- Protection can come in the following materials:
 - Buffer Web
 - Heavy Duty Sling Web
 - Leather
 - Super Pad Felt
 - PVC Belting

	 WARNING
	<p>SLING FAILURE CAN CAUSE</p> <p>DEATH OR INJURY</p> <p>SLING FAILURE RESULTS FROM MISUSE, DAMAGE, AND EXCESSIVE WEAR</p>
	<p>ADHERE TO INDUSTRY STANDARDS & REGULATIONS</p>

Additional Resources

Additional resources to ensure that you are properly trained and knowledgeable regarding the safety and use of synthetic slings include, but are not limited to:

- WSTDA-WS-1: Recommended Standard Specifications for Synthetic Web Slings
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- OSHA 29 CFR 1910.184 – Slings
- Rigging Handbooks
- OSHA Guidance on Safe Sling Use.
- Formal training provided by manufacturer or outside entities.



Factors Affecting Synthetic Sling Performance

CUTTING:

The most common cause for a sling being taken out of service. All synthetic slings are subject to cutting when lifting items with edges. Edges that come in contact with the sling should be padded with material of sufficient strength to prevent damage to the sling. Wear pads give extra protection to the sling where the most wear occurs. Please refer to our page on wear pads and sleeves for all of your options. Regardless of location or type of cut – anytime a sling is cut in any way, shape or form – it must be removed from service.

HOLES, TEARS, ABRASION, ETC.:

Any violation of the integrity of the sling construction can and will reduce the performance of the sling. Always use appropriate padding and wear protectors; avoid dragging slings across floors; avoid pulling slings from under loads.

ULTRAVIOLET EXPOSURE:

- Environments in which synthetic webbing slings are continuously exposed to ultraviolet light can affect the strength of synthetic webbing slings in varying degrees from little to total degradation.
- Suggested procedures to minimize the effects of ultraviolet light and sun light:
 - Store slings in a cool, dry and dark place when not being used for prolonged periods of time.
 - Inspect slings weekly or even more frequently depending on sling use.
- Visual indications of ultraviolet degradation are:
 - Bleaching out of sling color
 - Increased stiffness of sling material
 - Surface abrasion in areas not normally in contact with the load
 - Slings used in environments where they are subject to continuous exposure to ultraviolet light should be proof tested to two times rated capacity annually, or more frequently depending on severity of exposure.

IMPROPER LOADING:

Overloading, imbalanced loading, shock loading, failure to consider hitch, angle and tension effect on rated capacity reduction – all of these issues can reduce the functionality, safety and integrity of the sling. Always adhere to rated capacities; always take into consideration hitch, angle and tension in calculating working load limit; build and rig loads such that they are properly balanced and always avoid shock-loading.

SLING LENGTH:

The selected sling must be of sufficient length to accommodate the load when factoring in the sling to load angle. Failure to consider sling length in conjunction with sling to load angle can result in an overloaded sling.

FOREIGN MATTER:

Dirt, grease, grit, metal chips – any foreign matter can damage the sling. Make all efforts to keep slings clean and free of foreign materials.

TEMPERATURE:

Typical synthetic slings (flat/web slings and roundslings) are not specified for use in temperatures exceeding 180°F (82°C) or below -40°F (-40°C). For information on lifting solutions in environments beyond these parameters, contact Liftext®.

CHEMICALLY ACTIVE ENVIRONMENTS:

Chemically active environments can affect the strength of slings in varying degrees, ranging from little to total degradation. Before ordering slings that are to be used in a chemically active environment, give us a call. We would be pleased to recommend the right sling for your application.

ALKALIS:

Nylon is resistant to many alkalis, but is subject to degradation ranging from little to moderate in some alkalis. Polyester is subject to degradation in alkalis, ranging from little to total degradation.

ACIDS:

Nylon is subject to degradation in acids ranging from little to total degradation. Polyester is resistant to many acids, but is subject to degradation ranging from little to moderate in some acids.

Each application must be evaluated, taking into consideration the following:

- Type of acid, alkali or other chemical
- Exposure conditions
- Concentration
- Temperature

PROPER CARE AND STORAGE:

Slings should be stored in a clean, dry environment. Slings should be hung from a rack. For maximum ultraviolet protection – store slings in a dark area.

Hitches

CHOKER HITCH:

The sling is passed around the load and through one eye. The remaining eye is engaged to the hook. Note that the angle of choke can result in a reduction to the rated capacity for that operation. See chart titled "Choker Hitch Adjustment".



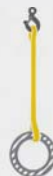
BASKET HITCH:

The sling surrounds the load while each eye is engaged to the hook (or hooks) above. Note that a basket hitch can be used in either a single or double hook configuration. Note that the sling-to-load angle can result in a reduction to the rated capacity for that operation. See chart titled "Sling Angle - Reduction Factor". Additionally, the sling-to-load angle can result in increased tension. This increased tension should be factored into sling selection. See chart titled "Sling Angle - Tension Factor".



VERTICAL HITCH:

One eye is engaged directly to the load while the other eye is engaged to the hook.

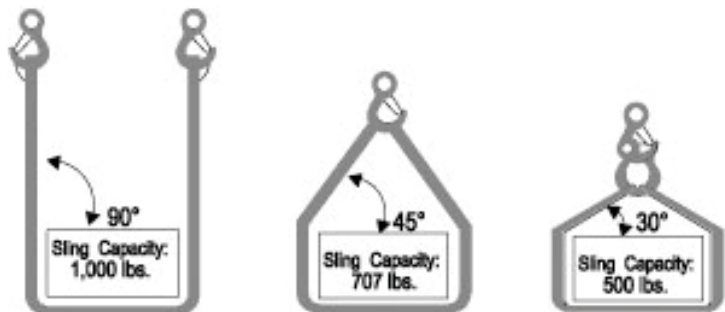


BRIDLE HITCH:

Two or more legs coming from one collection point.



Sling to Load Angle



When selecting a sling to carry a given load, it is important to consider the angle at which the sling will be used. As an example, one sling in a basket hitch or two slings attached to one crane hook are different applications involving different sling angles. The degree of the angle will determine how much capacity will be reduced. To determine if a particular sling will have the capacity required, take the angle between the sling leg and the horizontal, then multiply the sling's rating by the factor provided in the accompanying table.

Sling Angle Reduction Factor & Tension Factor

FOR BASKET & BRIDLE HITCHES

METHOD 1- DETERMINE REDUCTION TO RATED CAPACITY

- 1) Calculate the Sling to Load Angle (see page 16 - Sling To Load Angle).
- 2) Determine the associated reduction factor (see chart).
- 3) Multiply the rated capacity for the basket hitch as indicated on the sling tag by the reduction factor.
- 4) The result is the safe capacity designation for that sling in that rigging configuration.

Method 1 Reduction Factor	1.000	0.996	0.985	0.966	0.940	0.906	0.866	0.819	0.766	0.707	0.643	0.574	0.500
Sling to Load Angle	90°	85°	80°	75°	70°	65°	60°	55°	50°	45°	40°	35°	30°
Method 2 Tension Factor	1.000	1.004	1.015	1.035	1.064	1.104	1.155	1.221	1.305	1.414	1.555	1.742	2.000

METHOD 2- DETERMINE INCREASED TENSION/EFFECTIVE WEIGHT OF THE LOAD

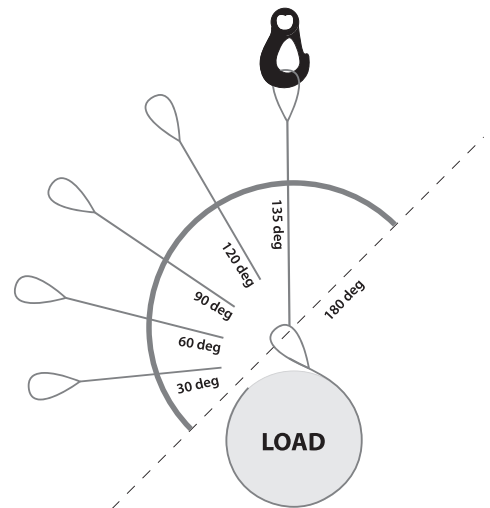
- 1) Calculate the Sling to Load Angle (see page 16 - Sling To Load Angle).
- 2) Determine the associated tension factor (see chart).
- 3) Multiply the load weight by the tension factor.
- 4) The result is the "Effective Weight" of the load in that rigging configuration- be sure to select a sling with adequate capacity. (A longer sling will increase the Sling to Load angle, thereby reducing the tension factor/effective weight of the load.)

FOR CHOKER HITCHES

When a load is rigged using a choker hitch- if the choke angle is less than 120°, then the rated capacity of the sling must be reduced.

- 1) Calculate the angle of choke (see illustration).
- 2) Determine the associated reduction factor (see chart).
- 3) Multiply the rated capacity for the choker hitch as indicated on the sling tag by the reduction factor.
- 4) The result is the safe capacity rating for that sling in the rigging configuration.

Angle of Choke Degree	Rated Capacity %
Over 120	100
90-120	87
60-89	74
30-59	62
0-29	49



SLING STRENGTH RELATIVE TO CONNECTIVE HARDWARE: AS STATED BY WSTDA, SLING STRENGTH IS AFFECTED BY THE SIZE OF THE CONNECTION HARDWARE. REFER TO WSTDA STANDARDS FOR INFORMATION PERTAINING TO APPROPRIATE CONNECTION HARDWARE SIZES.