



THE TUFLEX DIFFERENCE

All **Lift-All** slings meet or exceed OSHA and ASME B30.9 standards and regulations

What is a Tuflex Roundsling?

A *Tuflex* roundsling is an endless synthetic sling made from a skein of polyester yarn covered by a double-wall tubular jacket. The roundsling body can be compared to sling webbing with the tubular jacket face yarns woven without binder yarns. This allows the core yarns to move independently within the jacket.

Tufhide Jacket on EN360 and Larger Slings

The double-wall *Tufhide* jacket (made from bulked nylon fibers) offers better abrasion resistance for our larger capacity *Tuflex* Slings. Additionally, *Tufhide* reduces the heat buildup that can damage other high capacity roundslings when used in a choker hitch.

Features and Benefits

Promotes Safety

- Lightweight to reduce fatigue and strain on riggers.
- Synthetic materials won't cut hands.
- Consistent matched lengths for better multiple sling load control.
- No loss of strength from abrasion to cover.
- *Tuff-Tag* provides serial numbered identification for traceability.
- Low stretch (about 3% at rated capacity).
- Reduces sling and load abrasion.
- Good for low headroom lifts.
- Conforms to shape of load to grip securely.

- Tubular jacket protects load bearing yarns from UV degradation.
- Red core yarns provide added visual warning of sling damage.
- Color-coding provides positive sling capacity information.

Saves Money

- Double-wall cover for greater sling life.
- The soft cover won't scratch load surface.
- Conforms to shape of the load for reduced load damage.
- The cover is seamless with no sewn edges, preventing rupture which requires removal from service.
- EN360 and larger *Tuflex* roundslings feature *Tufhide* wear-resistant nylon jacket for extra sling life.
- *Tuff-Tag* provides required OSHA information for the life of the sling.

Saves Time

- Color-coded capacities for quick identification.
- Lightweight and pliable for easy rigging and storage.
- Independent core yarns choke tightly but release easily after use.
- Easy to carry.

WARNING

Follow temperature and chemical information located in the WEB section of this catalog.

Always protect synthetic slings from being cut or damaged by corners, edges and protrusions by using protection sufficient for each application.

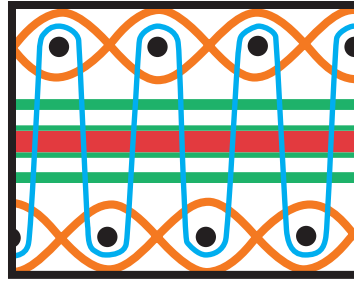


Refer to Sling Protection section in this catalog.

Construction Comparisons: Sling Webbing versus Tuflex Sleaving

Sling Webbing

- Transverse pick yarns inter-relate with binder 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.

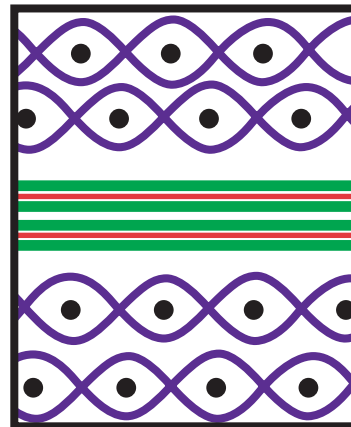


**Sling Webbing
(Side View)**

Sling webbing (as graphically demonstrated), has its surface yarns connected from side to side, to not only protect the core yarns but to position 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 the reason why sling webbing has red core yarns to visually reveal damage and act as a basis for sling rejection.

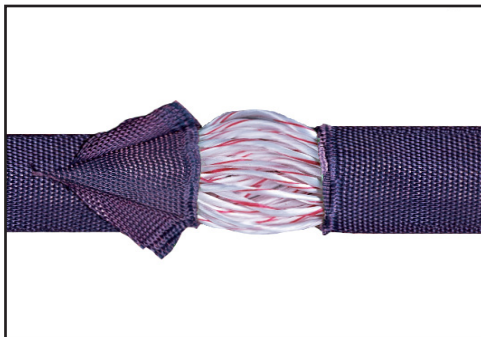
Tuflex Sleaving

- Transverse pick yarns position surface yarns and protect core yarns.
- Woven surface yarns protect core yarns, but carry no load.
- Longitudinal core yarns carry 100% of load.
- Red core warning yarns.



**Tuflex Sleeve
(Side View)**

Roundslings construction (as shown above), protects all load carrying core yarns from abrasion with an independent, woven jacket. Replacement is not necessary until the red or white core yarns can be seen through holes in the jacket. When core yarns are visible, the sling must be removed from service. Tuflex roundslings provide double-wall protection for extended sling life.



HOW TO ORDER

Ordering Tuflex Polyester Roundslings*

1. Specify sling Part Number found in the charts throughout the Tuflex section.
 2. Specify sling length in feet (bearing point to bearing point). Refer to footnotes under Tuflex tables for specific sling lengths and tolerances.
 3. Matched lengths of slings must be specified at time of order.
- Endless and Eye & Eye styles of Tuflex are made to a tolerance of $\pm (1" + 1\%$ of the specified length), and can stretch 3% at rated capacity.
 - Braided Tuflex length tolerance is $\pm (2" + 5\%$ of the ordered length w/sling at rest). At it's rated capacity, braided Tuflex will stretch approximately 9%.

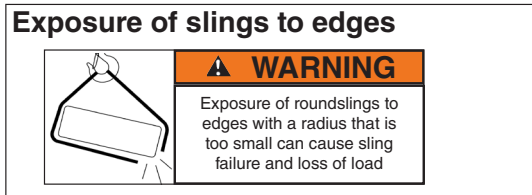
* Prior to sling selection and use, please review and understand the HELP section in this catalog.

USING TUFLEX ROUNDSLINGS

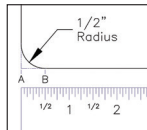
Protect Sling from Damage

ALWAYS protect roundslings from being cut or damaged by corners, edges and protrusions using protection sufficient for each application.

Do not ignore warning signs of misuse. **Cut marks detected during any sling inspection serve as a clear indication that cut protection is needed.** Refer to Sling Protection section of our catalog.



Edges do not need to be sharp to cause failure of the sling. The following table shows the minimum allowable edge radii suitable for contact with unprotected roundslings. Chamfering or cutting off edges is not an acceptable substitute for fully rounding the edges to the minimum radius. Slings can also be damaged from contact with edges or burrs at the sling connection.



Measure the edge radius. The radius is equal to the distance between points A and B.

| Minimum Edge Radii suitable for contact with unprotected polyester roundslings | | |
|--|---------------------------|---------------------------|
| Rated Capacity Vertical (lbs.) | Minimum* Edge Radii (in.) | Sling Width At Load (in.) |
| EN30 | 0.19 | 1.00 |
| EN60 | 0.25 | 1.38 |
| EN90 | 0.31 | 1.75 |
| EN120 | 0.31 | 1.88 |
| EN150 | 0.38 | 2.00 |
| EN180 | 0.44 | 2.13 |
| EN240 | 0.44 | 2.63 |
| EN280 | | |
| EN360 | 0.50 | 3.25 |
| EN460 | | |
| EN600 | 0.69 | 4.00 |
| EN800 | 0.75 | 4.63 |
| EN900 | | |
| EN1000 | 0.88 | 5.25 |
| EN1100 | | |

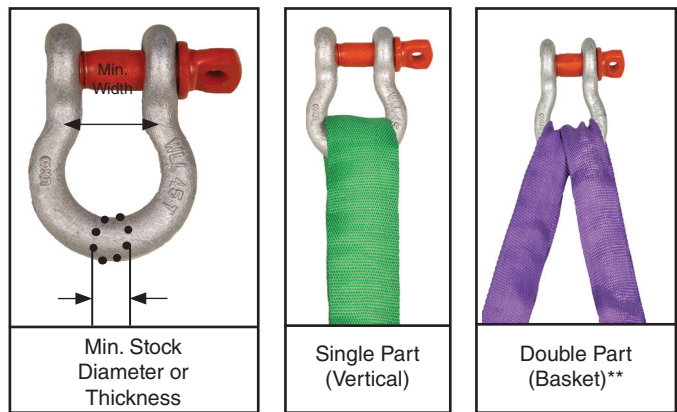
*For further information on minimum edge radii, contact *Lift-All* or see WSTDA-RS-1.

For Temperature and Chemical Information refer to the 'Environmental Consideration' page in the WEB section in this catalog.

Sling Hardware and Connections

Connection surfaces must be smooth to avoid abrading or cutting slings. Roundslings can be damaged or weakened by excessive compression between the sling and the connection points. Select and use proper connection hardware that conforms to the size requirements listed for choker, vertical, or basket hitches in the charts below.

Contact *Lift-All* (or see WSTDA-RS-1), for information about how to calculate whether a smaller connection size is allowable when tension on a roundslings is less than its capacity.



| Minimum hardware dimensions suitable for use with Tuflex Roundslings | | | | |
|--|---------------------------|------------------|---------------------------|------------------|
| Tuflex Size | Single Part | | Double Part** | |
| | Min. Stock Diameter (in.) | Min. Width (in.) | Min. Stock Diameter (in.) | Min. Width (in.) |
| EN30 | 0.44 | 1.00 | 0.57 | 1.38 |
| EN60 | 0.63 | 1.38 | 0.88 | 1.88 |
| EN90 | 0.75 | 1.75 | 1.06 | 2.38 |
| EN120 | 0.88 | 1.88 | 1.25 | 2.50 |
| EN150 | 1.00 | 2.00 | 1.38 | 2.88 |
| EN180 | 1.13 | 2.13 | 1.63 | 3.00 |
| EN240 | 1.19 | 2.63 | 1.63 | 3.75 |
| EN280 | 1.25 | | | |
| EN360 | 1.50 | 3.25 | 2.00 | 4.50 |
| EN460 | 1.62 | | | |
| EN600 | 2.00 | 4.00 | 2.75 | 5.63 |
| EN800 | 2.13 | 4.63 | 3.00 | 6.50 |
| EN900 | 2.25 | | | |
| EN1000 | 2.50 | 5.25 | 3.50 | 7.38 |
| EN1100 | 2.62 | | | |

**For hardware connected to the body of Eye/Eye Tuflex Roundslings, use the double part columns.

Round Slings

DIRECT CONNECT HOOKS

Direct Connect hooks are the quickest and easiest way to add hooks to *Tuflex* roundslings and web slings at your job site. No tools or extra parts are needed.

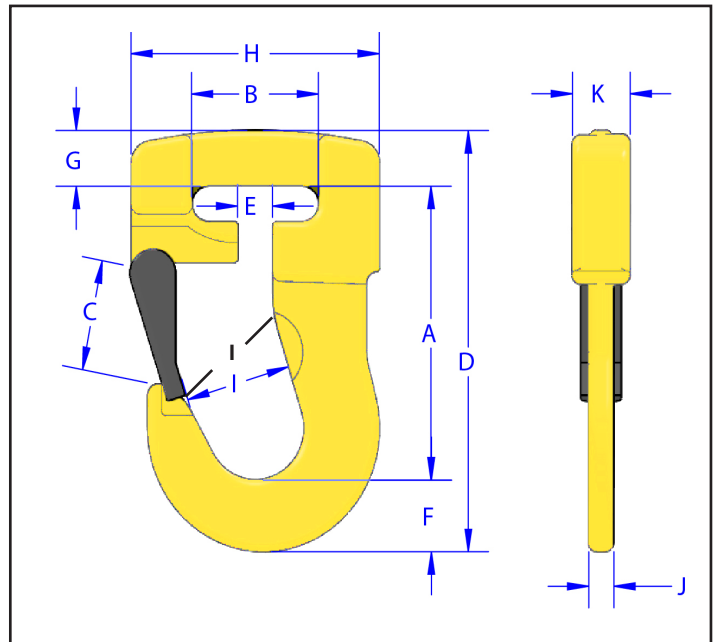
For *Tuflex* slings, just match the color-coded hook to the same color *Tuflex* sling, and you're ready to go. Rated capacities are the same for both the hook and the *Tuflex* roundslings.



Round Slings

Features and Benefits

- Rugged: The alloy steel hook and latch are forged for superior toughness.
- Color-coded hook matches *Tuflex* color and capacity.
- Web-Trap design keeps sling in place, ready to use.
- Four hook sizes to match *Tuflex* sizes EN30 (Purple), EN60 (Green), EN90 (Yellow) and EN150 (Red).
- Can be used with 1" and 2" web slings.
- Quick connections with no tools needed.
- Increases the life of the sling by reducing wear at the bearing point.



| Part No.* | Color | Rated Capacity (lbs.) | Tuflex | Web Slings | | A (in.) | B (in.) | C (in.) | D (in.) | E (in.) | F (in.) | G (in.) | H (in.) | I (in.) | J (in.) | K (in.) | Weight (lbs.) |
|-----------|--------|-----------------------|--------|------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| | | | | Width | Plies | | | | | | | | | | | | |
| DCH1 | Purple | 2,600 | EN30 | 1 | 1 | 3.38 | 1.56 | 0.91 | 4.84 | 0.47 | 0.81 | .67 | 3.07 | 1.22 | 0.70 | 1.13 | 1.54 |
| DCH2 | Green | 5,300 | EN60 | 1 | 2 | 4.00 | 1.75 | 1.28 | 5.83 | 0.75 | 1.07 | .83 | 3.58 | 1.57 | 0.88 | 1.39 | 2.65 |
| DCH3 | Yellow | 8,400 | EN90 | 2 | 1 & 2 | 4.63 | 2.13 | 1.40 | 6.89 | 0.83 | 1.26 | .98 | 4.45 | 1.97 | 1.00 | 1.76 | 4.85 |
| DCH4 | Red | 13,200 | EN150 | — | — | 5.75 | 2.34 | 1.83 | 8.78 | 1.63 | 1.60 | 1.42 | 5.21 | 2.34 | 1.23 | 2.21 | 9.90 |

*Add 'L' to end of part number to order a latch with the hook.

TUFLEX ENDLESS ROUND_SLINGS

The Most Versatile Tuflex Roundsliding

Features and Benefits

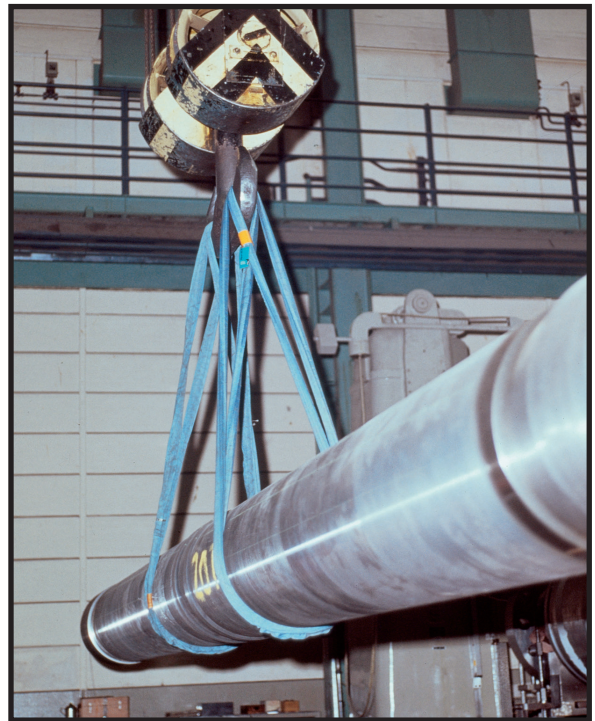
Maintains all the basic Tuflex features plus...

Promotes Safety

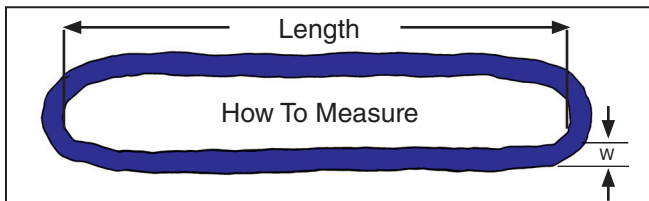
- Load stability and balance can be achieved by spreading sling legs.

Saves Money

- Wear points can be shifted to extend sling life.
- The most flexible style of sling.



Round Slings



TUFLEX ENDLESS ROUND_SLINGS

| Part Number | Color | Rated Capacity* (lbs.) | | | | Minimum Length (ft.) | Approximate Measurements | | | |
|-------------|--------|------------------------|--------|--------------|--------------|----------------------|--------------------------|-----------------------------|------------------------------|-------------------------------|
| | | Vertical | Choker | Basket @ 90° | Basket @ 45° | | Weight (lbs. / ft.) | Body Diameter Relaxed (in.) | Body Width at Load (W) (in.) | Minimum Hardware Dia.** (in.) |
| EN30 | Purple | 2,600 | 2,100 | 5,200 | 3,600 | 1.5 | .2 | 0.63 | 1.00 | 0.44 |
| EN60 | Green | 5,300 | 4,200 | 10,600 | 7,400 | 1.5 | .3 | 0.88 | 1.38 | 0.63 |
| EN90 | Yellow | 8,400 | 6,700 | 16,800 | 11,800 | 3.0 | .5 | 1.13 | 1.75 | 0.75 |
| EN120 | Tan | 10,600 | 8,500 | 21,200 | 14,000 | 3.0 | .6 | 1.13 | 1.88 | 0.88 |
| EN150 | Red | 13,200 | 10,600 | 26,400 | 18,000 | 3.0 | .8 | 1.38 | 2.00 | 1.00 |
| EN180 | White | 16,800 | 13,400 | 33,600 | 23,000 | 3.0 | .9 | 1.38 | 2.13 | 1.13 |
| EN240 | Blue | 21,200 | 17,000 | 42,400 | 29,000 | 3.0 | 1.3 | 1.75 | 2.63 | 1.19 |
| EN280 | Orange | 25,000 | 20,000 | 50,000 | 35,000 | 3.0 | 1.3 | 1.87 | 2.88 | 1.25 |
| EN360 | Gray | 31,000 | 24,800 | 62,000 | 43,000 | 3.0 | 1.7 | 2.25 | 3.25 | 1.50 |
| EN460 | Orange | 40,000 | 32,000 | 80,000 | 56,000 | 3.0 | 2.2 | 2.50 | 3.50 | 1.62 |
| EN600 | Brown | 53,000 | 42,400 | 106,000 | 74,000 | 8.0 | 2.8 | 2.75 | 4.00 | 2.00 |
| EN800 | Olive | 66,000 | 52,800 | 132,000 | 93,000 | 8.0 | 3.4 | 3.13 | 4.63 | 2.13 |
| EN900 | Orange | 77,000 | 61,600 | 154,000 | 108,000 | 8.0 | 3.7 | 3.42 | 4.88 | 2.25 |
| EN1000 | Black | 90,000 | 72,000 | 180,000 | 127,000 | 8.0 | 4.3 | 3.63 | 5.25 | 2.50 |
| EN1100 | Orange | 100,000 | 80,000 | 200,000 | 140,000 | 8.0 | 5.2 | 4.10 | 5.50 | 2.62 |

** This is the minimum recommended diameter for the connection hardware to be used for a vertical hitch.

*

WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section of this catalog.

TUFLEX EYE AND EYE

A More Rugged and Durable **Tuflex** Roundsliding

The Eye and Eye Advantage

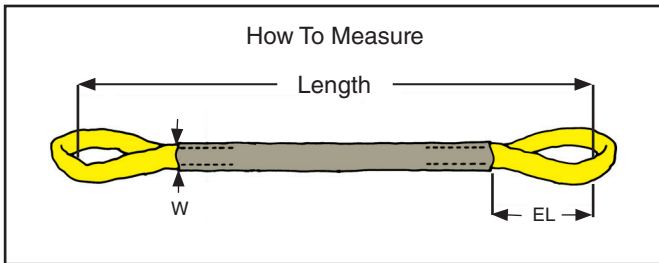
An additional jacket of texturized and abrasion resistant nylon covers the **Tuflex** body forming two color-coded lifting eyes.

Maintains all the basic **Tuflex** features plus ...

- Saves money by extending sling life in abrasive environments.



Round Slings



TUFLEX EYE & EYE ROUNDSLINGS

| Part Number | Eye Color | Rated Capacity (lbs.)* | | | | Minimum Length* (ft.) | Approximate Measurements | | | |
|-------------|-----------|------------------------|--------|--------------|--------------|-----------------------|--------------------------|------------------------------|---------------------------------|------------------------------|
| | | Vertical | Choker | Basket @ 90° | Basket @ 45° | | Weight (lbs./ft.) (ft.) | Body Width at Load (W) (in.) | Standard Eye Length* (EL) (in.) | Minimum Hardware Dia** (in.) |
| EE30 | Purple | 2,600 | 2,100 | 5,200 | 3,600 | 4 | 0.25 | 2.25 | 10 | 0.44 |
| EE60 | Green | 5,300 | 4,200 | 10,600 | 7,400 | 4 | 0.36 | 2.50 | 10 | 0.63 |
| EE90 | Yellow | 8,400 | 6,700 | 16,800 | 11,800 | 4 | 0.50 | 2.50 | 12 | 0.75 |
| EE120 | Tan | 10,600 | 8,500 | 21,200 | 14,000 | 5 | 0.60 | 3.50 | 12 | 0.88 |
| EE150 | Red | 13,200 | 10,600 | 26,400 | 18,000 | 5 | 0.84 | 3.50 | 14 | 1.00 |
| EE180 | White | 16,800 | 13,400 | 33,600 | 23,000 | 7 | 0.96 | 3.50 | 16 | 1.13 |
| EE240 | Blue | 21,200 | 17,000 | 42,400 | 29,000 | 7 | 1.50 | 3.50 | 16 | 1.19 |
| EE280 | Orange | 25,000 | 20,000 | 50,000 | 35,000 | 7 | | 4.50 | 18 | 1.25 |
| EE360 | Gray | 31,000 | 24,800 | 62,000 | 43,000 | 7 | 1.80 | 6.00 | 20 | 1.50 |
| EE460 | Orange | 40,000 | 32,000 | 80,000 | 56,000 | 7 | | | 22 | 1.63 |
| EE600 | Brown | 53,000 | 42,400 | 106,000 | 74,000 | 8 | 2.70 | 7.00 | 24 | 2.00 |
| EE800 | Olive | 66,000 | 52,800 | 132,000 | 93,000 | 10 | 3.30 | 8.00 | 30 | 2.13 |
| EE900 | Orange | 77,000 | 61,600 | 154,000 | 108,000 | | | | | |
| EE1000 | Black | 90,000 | 72,000 | 180,000 | 127,000 | 12 | 4.40 | 9.00 | 36 | 2.50 |
| EE1100 | Orange | 100,000 | 80,000 | 200,000 | 140,000 | | | | | |

** This is the minimum recommended diameter for the connection hardware to be used for a vertical hitch.

* Shorter lengths available using reduced eye lengths.

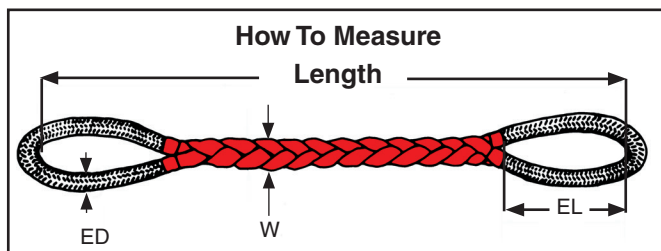
▲ WARNING Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section of this catalog.

BRAIDED TUFLEX ROUNDSLINGS

For multi-part heavy lifting, braided *Tuflex* roundslings offer you additional security.

Redundant Safety

Tuflex braids are made from three (6-Part), or four (8-Part) individual *Tuflex* roundslings. Should one of these component slings be damaged while in use, the remaining undamaged slings will be able to assist in safely returning the load to the ground.



Features and Benefits

Maintains all the basic *Tuflex* features plus ...

Promotes Safety

- Braided construction offers engineered safety.
- Lightweight and more flexible than chain slings.

Saves Money

- Large capacity slings are generally purchased for one major lift, then rarely used again. Braided *Tuflex* can be disassembled into component slings for general purpose lifting.
- Braided *Tuflex* roundslings can be returned to *Lift-All* for disassembly, inspection, and re-tagging as individual slings.

Saves Time

- Easy to transport and hook-up.

Round Slings

6-PART FLAT BRAID (B6E)

| Part Number | Color | Rated Capacity (lbs.)* | | | Minimum Length ⁺ (ft.) | Approximate Measurements | | | | | |
|-------------|--------|------------------------|---------|---------|-----------------------------------|--------------------------|--------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------|
| | | Vertical | Choker | Basket | | Weight (lbs./ft.) | Standard Eye Length (EL) (in.) | Width at Load (W) (in.) | Thickness at Load (in.) | Eye Diameter (ED) (in.) | Minimum Hardware Dia.** (in.) |
| B6E30 | Purple | 6,700 | 5,300 | 13,400 | 4.50 | 0.8 | 15 | 3.25 | 0.75 | 1.75 | 0.63 |
| B6E60 | Green | 13,500 | 10,800 | 27,000 | 5.00 | 1.2 | 15 | 3.75 | 1.13 | 2.00 | 1.00 |
| B6E90 | Yellow | 21,400 | 17,100 | 42,800 | 5.50 | 1.6 | 15 | 4.25 | 1.25 | 2.00 | 1.25 |
| B6E120 | Tan | 27,000 | 21,600 | 54,000 | 5.50 | 2.0 | 15 | 4.50 | 1.31 | 2.25 | 1.38 |
| B6E150 | Red | 33,600 | 26,800 | 67,200 | 6.50 | 2.7 | 20 | 5.25 | 1.75 | 2.50 | 1.50 |
| B6E180 | White | 42,800 | 34,200 | 85,600 | 7.00 | 3.2 | 20 | 5.50 | 2.00 | 2.75 | 1.75 |
| B6E240 | Blue | 54,000 | 43,200 | 108,000 | 9.00 | 4.4 | 20 | 6.63 | 2.25 | 3.50 | 1.75 |
| B6E360 | Gray | 79,000 | 63,200 | 158,000 | 9.50 | 6.5 | 30 | 8.25 | 2.50 | 4.25 | 2.50 |
| B6E600 | Brown | 135,100 | 108,000 | 270,200 | 10.50 | 9.7 | 30 | 11.00 | 2.75 | 5.00 | 3.00 |
| B6E800 | Olive | 168,300 | 134,600 | 336,600 | 13.00 | 12.0 | 30 | 12.00 | 4.00 | 5.25 | 3.50 |
| B6E1000 | Black | 229,500 | 183,600 | 459,000 | 14.50 | 15.6 | 31 | 13.50 | 4.50 | 5.75 | 4.00 |

** This is the minimum recommended diameter for the connection hardware to be used for a vertical hitch.

+ Shorter lengths available using reduced eye lengths.

* **WARNING**

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section of this catalog.

BRAIDED TUFLEX ROUNDSLINGS

Round Slings



Order Information




Ordering length should be based on the sling at rest. Braided *Tuflex* length tolerance is $\pm (2" + 5\%$ of the ordered length), with the sling at rest. At its rated capacity, braided *Tuflex* will stretch approximately 9%.

Always protect synthetic slings from being cut or damaged by corners, edges and protrusions by using protection sufficient for each application.



Refer to Sling Protection section in this catalog.

8-PART ROUND BRAID (B8E)

| Part Number | Color | Rated Capacity (lbs.)* | | | Minimum Length [†] (ft.) | Approximate Measurements | | | | | |
|-------------|--------|---|---|---|-----------------------------------|--------------------------|--------------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|
| | | Vertical | Choker | Basket | | Weight (lbs./ft.) | Standard Eye Length (EL) (in.) | Width at Load (W) (in.) | Thickness at Load (in.) | Eye Diameter (ED) (in.) | Minimum Hardware Dia. ** (in.) |
| | |  |  |  | | | | | | | |
| B8E30 | Purple | 8,800 | 7,100 | 17,600 | 4.50 | 1.1 | 15 | 3.50 | 1.00 | 1.75 | 0.75 |
| B8E60 | Green | 18,000 | 14,400 | 36,000 | 5.00 | 1.5 | 15 | 4.00 | 1.38 | 2.00 | 1.13 |
| B8E90 | Yellow | 28,500 | 22,800 | 57,000 | 5.50 | 2.2 | 15 | 4.75 | 1.63 | 2.50 | 1.50 |
| B8E120 | Tan | 36,000 | 28,800 | 72,000 | 5.50 | 2.6 | 15 | 5.00 | 1.75 | 2.50 | 1.50 |
| B8E150 | Red | 44,900 | 35,900 | 89,800 | 6.50 | 3.6 | 20 | 6.00 | 2.13 | 2.75 | 1.75 |
| B8E180 | White | 57,100 | 45,600 | 114,200 | 7.00 | 4.1 | 20 | 6.25 | 2.50 | 3.25 | 2.00 |
| B8E240 | Blue | 72,000 | 57,600 | 144,000 | 9.00 | 5.6 | 20 | 7.50 | 2.75 | 3.75 | 2.00 |
| B8E360 | Gray | 105,400 | 84,300 | 210,800 | 9.50 | 8.3 | 30 | 9.50 | 3.25 | 4.50 | 2.50 |
| B8E600 | Brown | 180,200 | 144,100 | 360,400 | 10.50 | 12.0 | 30 | 13.00 | 3.75 | 5.50 | 3.50 |
| B8E800 | Olive | 224,400 | 179,500 | 448,800 | 13.00 | 16.0 | 30 | 13.50 | 4.50 | 6.00 | 4.00 |
| B8E1000 | Black | 306,000 | 244,000 | 612,000 | 14.50 | 20.0 | 31 | 15.75 | 5.25 | 6.50 | 4.75 |

** This is the minimum recommended diameter for the connection hardware to be used for a vertical hitch.

† Shorter lengths available using reduced eye lengths.

⚠ WARNING Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section of this catalog.

TUFLEX BRIDLE SLINGS

Features and Benefits

Promotes Safety

- Bridle slings provide better load control and balance.
- Use of hardware prevents cutting and abrasion of sling at bearing points.

Saves Money

- Reduces damage by protecting load between pick-up point and crane hook.

Saves Time

- Lightweight and pliable for easy rigging and storage.
- Sling hooks quickly connect to loads having hoist rings or eye bolts.

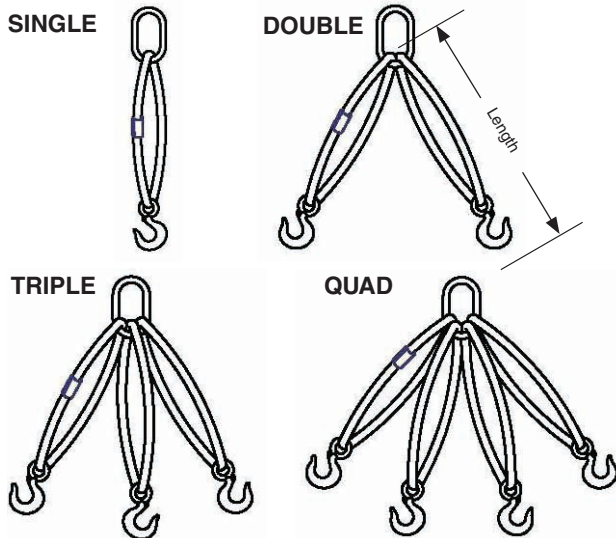
How to Order

Specify:

1. Number of legs:
S (Single), D (Double), T (Triple), Q (Quad)
2. Master Link: O (Oblong)
3. Bottom Attachments: S (Sling Hook), O (Oblong)
4. Tuflex Code: EN30, EN90, etc.
5. Length of Assembly - Feet
(Bearing point to bearing point)

Example:

DOSEN90 X 10' is a double leg bridle, with an oblong master link at the top, and sling hooks on each leg of the Tuflex EN90. Overall assembly length is 10-ft.



*Find hardware dimensions in Hardware section of this catalog. Use sling leg calculator to determine length @ www.lift-all.com

| LEGS | Tuflex Size | Rated Capacity (lbs.) | | | Hardware* | |
|--------|-------------|-----------------------|---------|---------|-----------|-----------------------------|
| | | Vertical | Choker | Basket | Hook | Masterlink Stock Dia. (in.) |
| SINGLE | EN30 | 2,600 | 2,100 | 5,200 | 2TA | 1/2 |
| | EN60 | 5,300 | 4,200 | 10,600 | 4.5TA | 3/4 |
| | EN90 | 8,400 | 6,700 | 16,800 | 7TA | 3/4 |
| | EN120 | 10,600 | 8,500 | 21,200 | 11TA | 1 |
| | EN150 | 13,200 | 10,600 | 26,400 | 11TA | 1 |
| | EN180 | 16,800 | 13,400 | 33,600 | 15TA | 1-1/4 |
| | EN240 | 21,200 | 17,000 | 42,400 | 22TA | 1-1/4 |
| | EN360 | 31,000 | 24,800 | 62,000 | 20TC | 1-1/2 |
| | EN600 | 53,000 | 42,400 | 106,000 | 30TC | 2 |
| | EN800 | 66,000 | 52,800 | 132,000 | 40TC | 2-1/4 |
| EN1000 | 90,000 | 72,000 | 180,000 | n/a | 2-1/2 | |

Round Slings

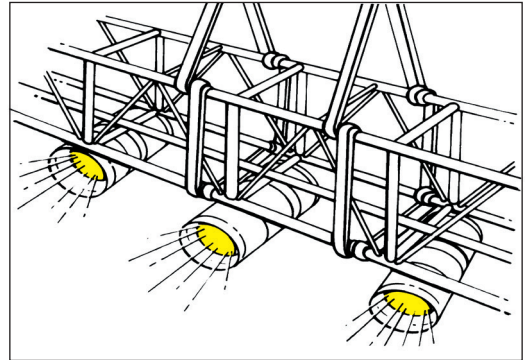
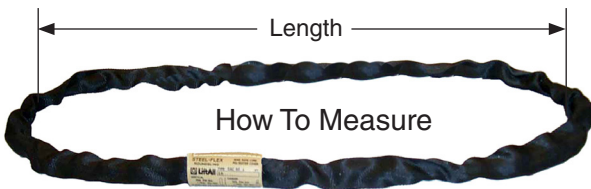
| LEGS | Tuflex Size | One Leg @ 90° | ALL Legs @ | | | Hardware* | |
|--------|-------------|---------------|------------|--------|--------|-----------|-----------------------------|
| | | | 60° | 45° | 30° | Hook | Masterlink Stock Dia. (in.) |
| DOUBLE | EN30 | 2,600 | 4,500 | 3,600 | 2,600 | 2TA | 1/2 |
| | EN60 | 5,300 | 9,100 | 7,400 | 5,300 | 4.5TA | 3/4 |
| | EN90 | 8,400 | 14,500 | 11,800 | 8,400 | 7TA | 1 |
| | EN120 | 10,600 | 18,300 | 14,900 | 10,600 | 11TA | 1-1/4 |
| | EN150 | 13,200 | 22,800 | 18,600 | 13,200 | 11TA | 1-1/4 |
| | EN180 | 16,800 | 29,100 | 23,700 | 16,800 | 15TA | 1-1/2 |
| | EN240 | 21,200 | 36,700 | 29,900 | 21,200 | 22TA | 1-1/2 |
| | EN360 | 31,000 | 53,700 | 43,800 | 31,000 | 20TC | 2 |
| | EN600 | 53,000 | 91,800 | 74,900 | 53,000 | 30TC | 2-1/2 |
| | EN800 | 66,000 | 114,300 | 93,300 | 66,000 | 40TC | 3 |
| EN1000 | 90,000 | 155,800 | 127,200 | 90,000 | n/a | 3-1/4 | |

| | | | | | | | |
|--------|--------|---------|---------|---------|--------|-------|-------|
| TRIPLE | EN30 | 2,600 | 6,700 | 5,500 | 3,900 | 2TA | 3/4 |
| | EN60 | 5,300 | 13,700 | 11,200 | 7,900 | 4.5TA | 1 |
| | EN90 | 8,400 | 21,800 | 17,800 | 12,600 | 7TA | 1-1/4 |
| | EN120 | 10,600 | 27,500 | 22,400 | 15,900 | 11TA | 1-1/2 |
| | EN150 | 13,200 | 34,200 | 27,900 | 19,800 | 11TA | 1-1/2 |
| | EN180 | 16,800 | 43,600 | 35,600 | 25,200 | 15TA | 1-3/4 |
| | EN240 | 21,200 | 55,000 | 44,900 | 31,800 | 22TA | 2 |
| | EN360 | 31,000 | 80,500 | 65,700 | 46,500 | 20TC | 2-1/4 |
| | EN600 | 53,000 | 137,600 | 112,400 | 75,900 | 30TC | 2-3/4 |
| | EN800 | 66,000 | 171,400 | 139,900 | 99,000 | 40TC | 3-1/2 |
| EN1000 | 90,000 | 233,800 | 190,800 | 135,000 | n/a | 4-1/4 | |

| | | | | | | | |
|--------|--------|---------|---------|---------|---------|-------|-------|
| QUAD | EN30 | 2,600 | 9,000 | 7,300 | 5,200 | 2TA | 3/4 |
| | EN60 | 5,300 | 18,300 | 14,900 | 10,600 | 4.5TA | 1-1/4 |
| | EN90 | 8,400 | 29,100 | 23,700 | 16,800 | 7TA | 1-1/2 |
| | EN120 | 10,600 | 36,700 | 29,900 | 21,200 | 11TA | 1-1/2 |
| | EN150 | 13,200 | 45,700 | 37,300 | 26,400 | 11TA | 1-3/4 |
| | EN180 | 16,800 | 58,200 | 47,500 | 33,600 | 15TA | 2 |
| | EN240 | 21,200 | 73,400 | 59,900 | 42,400 | 22TA | 2-1/4 |
| | EN360 | 31,000 | 107,300 | 87,600 | 62,000 | 20TC | 2-3/4 |
| | EN600 | 53,000 | 183,600 | 149,900 | 106,000 | 30TC | 3-1/2 |
| | EN800 | 66,000 | 228,600 | 186,600 | 132,000 | 40TC | 4-1/4 |
| EN1000 | 90,000 | 311,700 | 254,500 | 180,000 | n/a | 4-3/4 | |

STEELFLEX ROUNDSLINGS

THE STEEL SLING
WITH THE FABRIC FEEL



400°F Temperature Rating
NO Wire Rope Backup Needed
Core Inspection Window Standard

Round
Slings

Designed for suspension applications

With safety being of the utmost importance in overhead suspension, *Lift-All's Steelflex* roundslings combine flexibility, strength and heat resistance (400°F) with the soft feel of fabric to meet your most demanding suspension requirements.

Steelflex roundslings feature steel galvanized aircraft cable wound in an endless configuration. This wire core is encased in a black double-wall, polyester jacket. A unique inspection window allows for easy inspection of the core for broken wires and corrosion. The result is a highly flexible, easy to use sling that complies with all of the current rigging codes. Stretch at rated capacity is approximately 1%.

Features and Benefits

- No backup rigging required.
- Window allows complete core inspection.
- Superior flexibility makes rigging easy.
- Conforms to load to grip securely.
- Fewer SKU's to inventory.
- Superior cut resistance.
- Black cover for stage rigging applications.

| Part Numbers | Rated Capacity (lbs.) | | | Minimum Hardware Dia. (in.) |
|---------------|-----------------------|--------|--------|-----------------------------|
| | Vertical | Choker | Basket | |
| GACEN40X18IN | 3,600 | 3,000 | 7,200 | 5/8 |
| GACEN40X2 | | | | |
| GACEN60CX18IN | 5,300 | 4,200 | 10,600 | 5/8 |
| GACEN60CX2 | | | | |
| GACEN60X3 | | | | |
| GACEN60X4 | | | | |
| GACEN60X5 | | | | |
| GACEN60X6 | | | | |
| GACEN60X7 | | | | |
| GACEN60X8 | | | | |
| GACEN60X9 | | | | |
| GACEN60X10 | | | | |
| GACEN60X11 | | | | |
| GACEN60X12 | | | | |

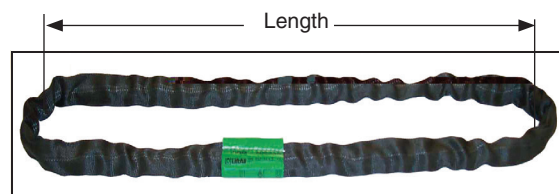
Note: Maximum length for *Steelflex* is 12-ft.






Inspection Window

POLYESTER STAGE SLINGS

These lightweight roundslings are ideal for easy and inconspicuous suspension of stage sound and lighting equipment. Black sleeve material helps sling blend into the surroundings. *Lift-All* stage slings include the *Tuflex* features and benefits except that the color coding of the slings is achieved by using a color-coded identification tag. Double-wall sleeve material is standard.



| Part Number | Rated Capacity (lbs.)* | | | Minimum Length (ft.) | Approximate Measurements | | | |
|---------------|--|--|--|----------------------|--------------------------|-----------------------------|---------------------|---------------------------------|
| | Vertical  | Choker  | Basket  | | Weight (lbs. / ft.) | Body Diameter Relaxed (in.) | Width at Load (in.) | Minimum Hardware Diameter (in.) |
| BSEN30 | 2,600 | 2,100 | 5,200 | 1-1/2 | .2 | 5/8 | 1-1/8 | 7/16 |
| BSEN60 | 5,300 | 4,200 | 10,600 | 1-1/2 | .3 | 7/8 | 1-1/2 | 5/8 |
| BSEN90 | 8,400 | 6,700 | 16,800 | 3 | .4 | 1-1/8 | 1-7/8 | 3/4 |

Round Slings

TUFLEX WIDE-LIFT

Wide Load Support and Balance

Tuflex wide-lift slings distribute the load over a wide area and offer better balance of larger loads - whether heavy or light.

Features and Benefits

Maintains all the basic *Tuflex* features plus ...

Promotes Safety

- Wide body distributes load over wide area and offers improved stability.

Saves Money

- Bearing point of eyes can be shifted to prolong sling life.
- Custom sizes available to fit your needs.





Saves Time

- Standard eye length is 12", making hook-up easy and fast.
- Standard body width is 12", making load balancing easier.

Note:
Wide-lift slings should only be used in basket hitch.

Consult *Lift-All* for special requirements.



| Code | Color of Eyes | Vertical Basket Hitch Rated Capacity* (lbs.) |
|--------------|--|--|
| WL30 | Purple  | 5,200 |
| WL60 | Green  | 10,600 |
| WL90 | Yellow  | 16,800 |
| WL120 | Tan  | 21,200 |

*

⚠ WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section of this catalog.

YOUR KEY TO LIFTING HEAVY LOADS USING THE LIGHTEST, MOST FLEXIBLE SLING AVAILABLE!

KeyFlex roundslings share most of the benefits of standard *Tuflex* roundslings.

Promote Safety

- Synthetic materials won't cut hands.
- Consistent matched lengths for better multiple sling control.
- Added security of a double-walled jacket.
- *Tuff-Tag* provides serial numbered identification for traceability.
- Conforms to shape of load to grip securely.
- Tubular jacket protects load bearing yarns from UV degradation.
- Core yarns provide visual warning of sling damage. **KeyFlex** orange jacket, *Technora*® gold core yarns.
- Endless style promotes load stability by spreading sling legs.

Inspection Criteria

Remove from service when:

- Cuts to sling cover expose gold core yarns.
- Holes, tears, snags or abrasion expose gold core yarns.
- The sling shows signs of melting, charring or chemical damage.
- Capacity tag is illegible or missing.
- Other visible damage that causes doubt as to strength of the sling.

Environmental Considerations

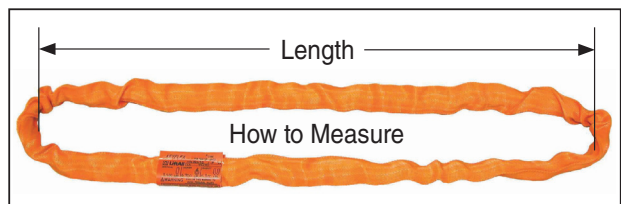
- **CHEMICAL:** Do not use in a chemical environment without first contacting *Lift-All*. Please provide specific chemical, concentration, temperature and time factors.
- **TEMPERATURE:** **KeyFlex** are approved for use up to 350°F.

Saves Time

- Independent core yarns choke tightly, but release easily after use.

Saves Money

- Double wall cover for greater sling life.
- Soft cover won't scratch load surface.
- Conforms to shape of load to reduce load damage.
- Seamless with no sewn edges, preventing rupture which requires removal from service.
- *Tufhide* wear resistant nylon jacket for extra sling life standard on KEN60K and larger sizes.
- *Tuff-Tag* provides required OSHA information for life of the sling.
- Wear points can be shifted to extend sling life.
- Endless version is the most versatile style of sling.
- **KeyFlex** roundslings with damaged covers may be returned to our factory for inspection and possible repair and proof test.



Ordering Information

Specify the sling code and length in feet, (bearing point to bearing point).

KeyFlex slings are made to a tolerance of $\pm 1"+1\%$ of the specified length, and can stretch 1% at rated capacity.

Notes:

1. Matched lengths of slings must be specified at time of order.
2. Available in endless style only.

* **WARNING** Always protect Roundslings from corners, edges, or protrusions. Refer to the Sling Protection section of this catalog to choose the right protection product for your lift.

THE STRONGEST AND LIGHTEST SLINGS IN THE WORLD

Keyflex roundslings are light and flexible to help prevent work-related injuries

Per comparable capacities, **KeyFlex** roundslings are on average:

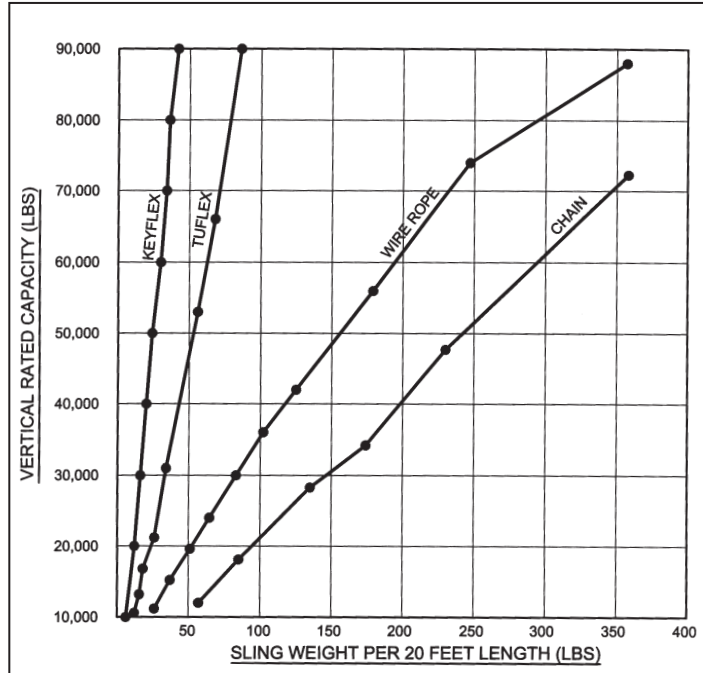
- 53% lighter than *Tuflex* Roundslings,
- 82% lighter than Wire Rope Slings,
- 89% lighter than G80 Chain Slings

The chart at the right plots the weights of 20-ft. long slings at various capacities:

| Slings Type | Vert. Rating | Weight |
|----------------|--------------|----------|
| KeyFlex | 90,000 lbs. | 42 lbs. |
| <i>Tuflex</i> | 90,000 lbs. | 86 lbs. |
| Wire Rope | 88,000 lbs. | 357 lbs. |
| Chain | 72,300 lbs. | |

KeyFlex Benefits:

- Lowest weight per capacity reduces risk of injury to riggers.
- 1% stretch at rated capacity reduces abrasion and allows for better load control.
- Great for low headroom situations.
- Aramid load yarns allow sling use **up to 350°F versus 200°F** for other synthetics.
- Lightweight and compact size promotes speedier rigging, transport and storage when compared to any other type of sling.



Round Slings

KeyFlex Capacities and Measurements

| Part Number | Rated Capacity (lbs.) | | | | Minimum Length (ft.) | Approximate Measurements | | | |
|-------------|-----------------------|---------|--------------|--------------|----------------------|--------------------------|-----------------------------|---------------------|---------------------------------|
| | Vertical | Choker | Basket @ 90° | Basket @ 45° | | Weight (lbs. / ft.) | Body Diameter Relaxed (in.) | Width at Load (in.) | Minimum Hardware Diameter (in.) |
| KEN10K | 10,000 | 8,000 | 20,000 | 14,100 | 3 | .3 | 1.00 | 1.56 | 0.69 |
| KEN15K | 15,000 | 12,000 | 30,000 | 21,000 | 3 | .5 | 1.13 | 1.75 | 0.88 |
| KEN20K | 20,000 | 16,000 | 40,000 | 28,000 | 3 | .6 | 1.25 | 2.00 | 1.06 |
| KEN25K | 25,000 | 20,000 | 50,000 | 35,000 | 3 | .7 | 1.25 | 2.13 | 1.25 |
| KEN30K | 30,000 | 24,000 | 60,000 | 42,000 | 3 | .8 | 1.38 | 2.13 | 1.44 |
| KEN40K | 40,000 | 32,000 | 80,000 | 56,000 | 3 | 1.0 | 1.75 | 2.75 | 1.50 |
| KEN50K | 50,000 | 40,000 | 100,000 | 70,000 | 5 | 1.3 | 1.88 | 2.88 | 1.75 |
| KEN60K | 60,000 | 48,000 | 120,000 | 84,000 | 5 | 1.7 | 2.00 | 3.13 | 2.00 |
| KEN70K | 70,000 | 56,000 | 140,000 | 98,000 | 8 | 1.9 | 2.13 | 3.25 | 2.19 |
| KEN80K | 80,000 | 64,000 | 160,000 | 113,000 | 8 | 2.1 | 2.25 | 3.50 | 2.38 |
| KEN90K | 90,000 | 72,000 | 180,000 | 127,000 | 8 | 2.4 | 2.50 | 3.88 | 2.38 |
| KEN100K | 100,000 | 80,000 | 200,000 | 141,000 | 8 | 2.6 | 2.75 | 4.25 | 2.50 |
| KEN125K | 125,000 | 100,000 | 250,000 | 176,000 | 8 | 3.0 | 3.00 | 4.88 | 2.63 |
| KEN150K | 150,000 | 120,000 | 300,000 | 210,000 | 8 | 3.5 | 3.25 | 5.25 | 2.88 |
| KEN175K | 175,000 | 140,000 | 350,000 | 240,000 | 8 | 4.8 | 3.50 | 5.75 | 3.13 |
| KEN200K | 200,000 | 160,000 | 400,000 | 280,000 | 8 | 5.3 | 3.75 | 6.13 | 3.38 |

KEYFLEX ULTRA™ ROUNDSLINGS

THE HIGHER CAPACITY KEYFLEX ROUNDSLINGS

Your best solution for high capacity, low weight slings.

- **High Capacities:** Up to 1/2 million pounds in a vertical hitch, or 1 million pounds in a basket hitch.
- **Rugged Construction:** Our best 4-Ply *Tufhide* nylon jacket covers three individual **Keyflex** roundslings with *Technora*® core.
- **High Value:** You get the *Lift-All* quality you expect which exceeds industry standards at a competitive price.
- **Extra Utility:** The three component core slings may be removed for individual use.
- **Repairable:** The cover can be replaced with a new cover.



Round Slings



Lightweight

Keyflex Ultra is 1/8 the weight of comparable capacity wire rope slings.

This makes it easier to handle, and safer for workers to use.

| Part Number | Rated Capacity (lbs.) | | | |
|-------------|-----------------------|---------|--------------|--------------|
| | Vertical | Choker | Basket @ 90° | Basket @ 45° |
| KEN3P200 | 200,000 | 160,000 | 400,000 | 280,000 |
| KEN3P250 | 250,000 | 200,000 | 500,000 | 350,000 |
| KEN3P300 | 300,000 | 240,000 | 600,000 | 420,000 |
| KEN3P400 | 400,000 | 320,000 | 800,000 | 560,000 |
| KEN3P500 | 500,000 | 400,000 | 1,000,000 | 700,000 |

Available in lengths up to 79 feet

| Part Number | Component Sling Size | Minimum Sling Length (ft.) | Weight Per Foot (lbs.) | Body Diameter Relaxed (in.) | Width at Load (in.) | Minimum Edge Contact Radius | Minimum Hardware Diameter |
|-------------|----------------------|----------------------------|------------------------|-----------------------------|---------------------|-----------------------------|---------------------------|
| KEN3P200 | KEN80K | 10 | 6.9 | 3.88 | 6.25 | 1.13 | 3.25 |
| KEN3P250 | KEN100K | 12 | 8.6 | 4.75 | 7.75 | 1.25 | 3.25 |
| KEN3P300 | KEN125K | 14 | 9.9 | 5.50 | 9.00 | 1.25 | 3.50 |
| KEN3P400 | KEN150K | 15 | 15.8 | 6.00 | 10.50 | 1.50 | 4.25 |
| KEN3P500 | KEN200K | 17 | 17.5 | 6.75 | 11.00 | 1.63 | 4.63 |

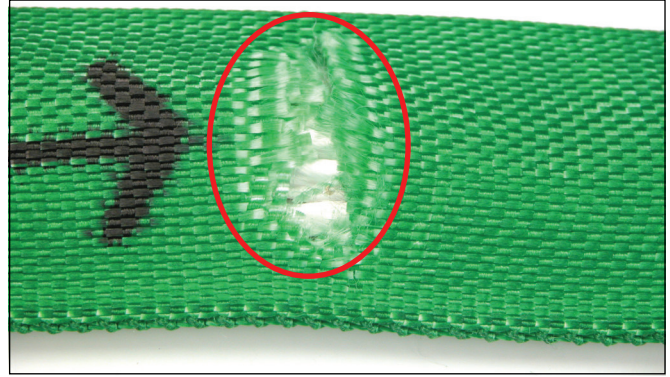
INSPECTION CRITERIA FOR TUFLEX / KEYFLEX

The following photos illustrate some of the damage that occurs and indicates the sling must be taken out of service. For inspection frequency requirements, see the HELP section in this catalog.

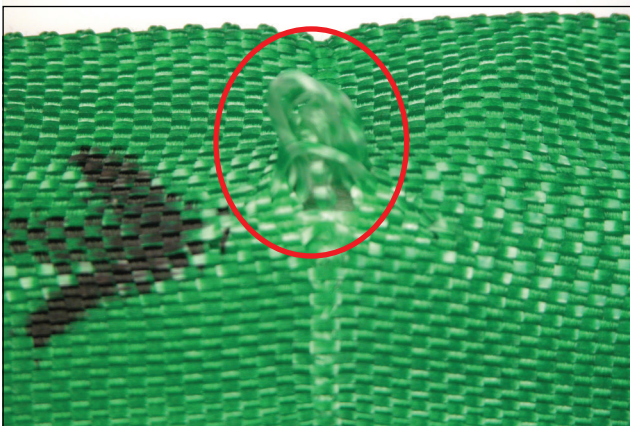
CUTS TO THE COVER

WHAT TO LOOK FOR: Broken fibers of equal length indicate that the sling has been cut. When core yarns are exposed, the damage to the yarns cannot be determined. Therefore, the sling must be taken out of service.

TO PREVENT: Always protect synthetic slings from being cut by using cut protection. See Sling Protection section in this catalog.



Round
Slings



HOLES, SNAGS, or PULLS

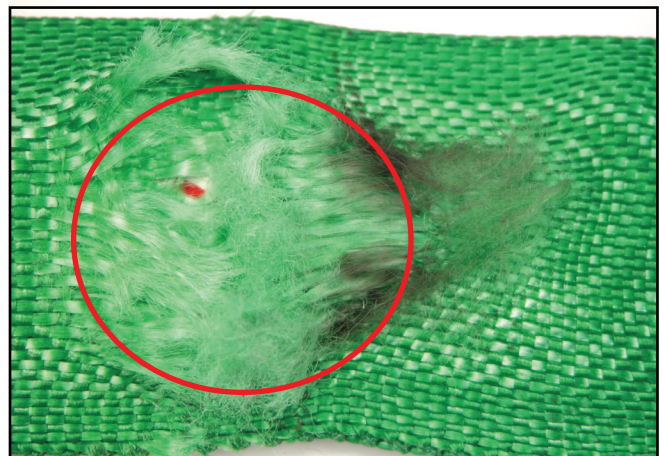
WHAT TO LOOK FOR: Punctures or areas where fibers stand out from the rest of the sling surface. Inspect sling and remove from service if core yarn is exposed.

TO PREVENT: Avoid sling contact with protrusions, both during lifts and while transporting or storing. See Sling Protection section in this catalog.

ABRASION

WHAT TO LOOK FOR: Areas of the sling that look and feel fuzzy indicate that the fibers have been broken by contact and movement against a rough surface. Affected areas are usually discolored. Inspect sling and remove from service if core yarn is exposed.

TO PREVENT: Never drag slings along the ground. Never pull slings from under loads that are resting on the sling. Use wear protection between slings and rough surface loads. See Sling Protection section in this catalog.



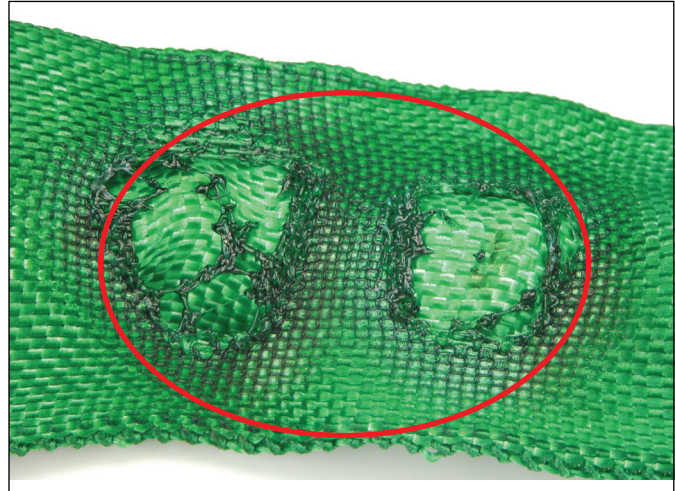
INSPECTION CRITERIA FOR TUFLEX / KEYFLEX

Round Slings

HEAT / CHEMICAL DAMAGE

WHAT TO LOOK FOR: Melted or charred fibers anywhere along the sling. Heat and chemical damage look similar and can damage sling fibers, compromising the sling's strength. Look for discoloration and/or fibers that have been fused together and may feel hard or crunchy. Slings showing heat or chemical damage must be removed from service.

TO PREVENT: Never use *Tuflex* roundslings where they can be exposed to temperatures in excess of 200°F, or around chemicals without confirming that the sling material is compatible with the chemicals being used. For elevated temperatures up to 350°F, use *KeyFlex* roundslings.



ILLEGIBLE OR MISSING TAGS



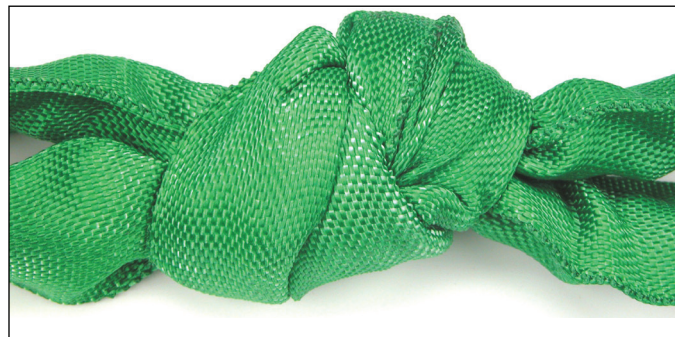
WHAT TO LOOK FOR: The information provided on the sling tag is important for knowing what sling to use and how it will function. If you cannot find or read all of the information on a sling tag, the sling must be taken out of service.

TO PREVENT: Never set loads down on top of slings or pull slings 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.

KNOTS

WHAT TO LOOK FOR: Knots compromise the strength of slings by not allowing all fibers to contribute to the lift as designed. Knots are rather obvious problems as shown here.

TO PREVENT: Never tie knots in slings.



Cuts to the cover NOT exposing internal core yarns. The double-walled jacket protects the inner core yarns from damage. If the damage appears only to the outer jacket and does not expose the inner core yarns, the sling may remain in service (except chemical or heat damage). The sling may also be returned to *Lift-All* for inspection and repair to the jacket.

TO PREVENT: Use wear protections between the sling and all edges that come in contact with the sling.