

## THE TUFLEX DIFFERENCE

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

Tuflex

### What is a Tuflex Roundsliding?

It is an endless synthetic sling made from a skein (continuous loop or hank) of polyester yarn covered by a double wall tubular jacket. The roundsliding body can also 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

Made from bulked nylon fibers, the double wall *Tufhide* jacket offers better abrasion resistance for our larger capacity *Tuflex* (EN360 and larger). In addition, *Tufhide* reduces the heat buildup that can damage other high capacity roundslings when used in a choker hitch.

### Tuflex Roundsliding Features, Advantages and Benefits

#### Promotes Safety

- Light weight reduces 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
- Load bearing yarns protected from UV degradation
- Red striped white 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
- Soft cover won't scratch load surface
- Conforms to shape of load for reduced load damage
- Seamless - no sewn edges to rupture prematurely, requiring removal from service
- EN360 and larger *Tuflex* feature *Tufhide* wear resistant nylon jacket for extra sling life
- *Tuff-Tag* provides required OSHA information for the life of the sling, not just the life of the tag

#### Saves Time

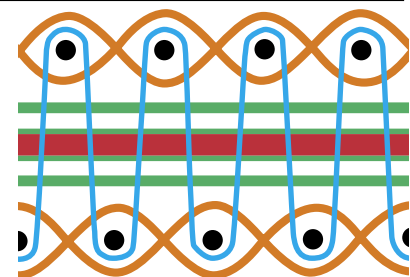
- Color coded capacities for quick identification
- Light weight and pliable for easy rigging and storage
- Independent core yarns choke tightly, but release easily after use
- Easy to carry - high strength to weight ratio for easy transportation

### Construction Comparisons - Sling Webbing vs Tuflex

#### 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

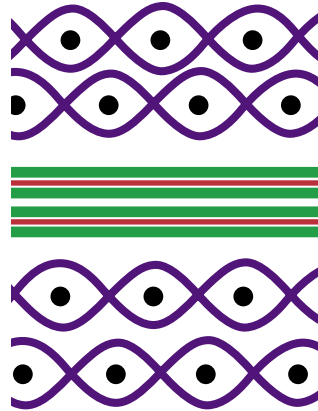
Sling Webbing (Side View)



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 why Sling Webbing has red core yarns to visually reveal damage and act as a basis for sling rejection.

## Tuflex

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



Tuflex  
(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 striped white core yarns can be seen through holes in the jacket. When core yarns are visible, sling must be removed from service. Tuflex roundslings provide double wall protection for extended sling life.

## INSPECTION CRITERIA & ENVIRONMENTAL CONSIDERATIONS

### ⚠ WARNING

Read Definition on page 3

### Inspection Criteria for Tuflex Roundslings

Remove from service when:

- Cuts to sling cover expose red striped white core yarns
- Holes, tears, snags or abrasions expose red striped white core yarns
- End fittings are pitted or corroded, cracked, distorted or broken
- The sling shows signs of melting, charring, or chemical damage
- Capacity tag is illegible or missing
- Other visible damage which causes doubt as to the strength of the sling

### Environmental Considerations

- Nylon and polyester are seriously degraded at temperatures above 200° F.
- Many chemicals have an adverse effect on nylon and polyester. This chart is a general guide. For specific temperature, concentration and time factors, please consult *Lift-All* prior to purchase or use.

|          |    |
|----------|----|
| CHEMICAL | OK |
|          | NO |

|                           | NYLON | POLYESTER |
|---------------------------|-------|-----------|
| Acids                     |       | *         |
| Alcohols                  |       |           |
| Aldehydes                 |       |           |
| Strong Alkalis            |       | **        |
| Bleaching Agents          |       |           |
| Dry Cleaning Solvents     |       |           |
| Ethers                    |       |           |
| Halogenated Hydro-Carbons |       |           |
| Ketones                   |       |           |
| Oils Crude                |       |           |
| Oils Lubricating          |       |           |
| Soap & Detergents         |       |           |
| Water & Seawater          |       |           |
| Weak Alkalis              |       |           |

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

Note: Tuflex sizes 360 through 1000 have a polyester core and nylon jacket.

A Warning Sheet is included with every Tuflex sling order from Lift-All. It lists inspection information and safe operating practices applying to these slings.

## HOW TO ORDER

Tuflex

### Ordering Tuflex Polyester Roundslings

1. Specify sling Part No. 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.

Endless and Eye & Eye styles of *Tuflex* are made to a tolerance of  $\pm 1\%$  of the specified length ( $\pm 1$ " minimum tolerance) and can stretch 3% at rated capacity.

Braided *Tuflex* length tolerance is  $\pm 5\%$  of the ordered length (sling at rest). At its rated capacity, braided *Tuflex* will stretch approximately 9%.

Note: Matched lengths of slings must be specified at time of order.

**Prior to sling selection and use, review and understand the “Help” sections pages 3 through 12.**



## TUFLEX ENDLESS ROUNDSLINGS

### Tuflex Endless (EN)

The Most Versatile *Tuflex* Roundsliding

#### Features, Advantages and Benefits

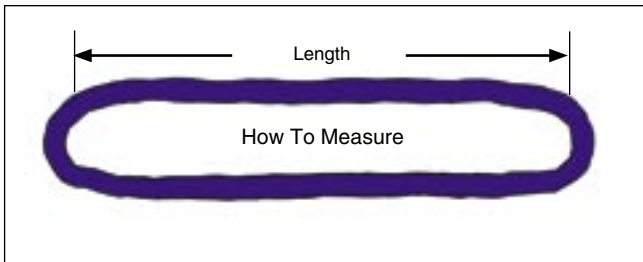
Maintains all the basic *Tuflex* features plus...

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



| Part No. | Color  | Rated Capacity (lbs.)* |        |         | Minimum Length (ft.) | Approximate Measurements |                         |                     |                                |
|----------|--------|------------------------|--------|---------|----------------------|--------------------------|-------------------------|---------------------|--------------------------------|
|          |        | Vertical               | Choker | Basket  |                      | Weight (lbs. / ft.)      | Body Dia. Relaxed (in.) | Width at Load (in.) | Minimum Hardware Dia. ** (in.) |
| EN30     | Purple | 2,600                  | 2,100  | 5,200   | 1 1/2                | .2                       | 5/8                     | 1 1/8               | 1/2                            |
| EN60     | Green  | 5,300                  | 4,200  | 10,600  | 1 1/2                | .3                       | 7/8                     | 1 1/2               | 5/8                            |
| EN90     | Yellow | 8,400                  | 6,700  | 16,800  | 3                    | .5                       | 1 1/8                   | 1 7/8               | 3/4                            |
| EN120    | Tan    | 10,600                 | 8,500  | 21,200  | 3                    | .6                       | 1 1/8                   | 2 1/8               | 7/8                            |
| EN150    | Red    | 13,200                 | 10,600 | 26,400  | 3                    | .8                       | 1 3/8                   | 2 1/4               | 1                              |
| EN180    | White  | 16,800                 | 13,400 | 33,600  | 3                    | .9                       | 1 3/8                   | 2 1/2               | 1 1/8                          |
| EN240    | Blue   | 21,200                 | 17,000 | 42,400  | 3                    | 1.3                      | 1 3/4                   | 3                   | 1 1/4                          |
| EN360    | Grey   | 31,000                 | 24,800 | 62,000  | 3                    | 1.7                      | 2 1/4                   | 3 3/4               | 1 1/2                          |
| EN600    | Brown  | 53,000                 | 42,400 | 106,000 | 8                    | 2.8                      | 2 3/4                   | 4 5/8               | 1 7/8                          |
| EN800    | Olive  | 66,000                 | 52,800 | 132,000 | 8                    | 3.4                      | 3 1/8                   | 5 1/4               | 2 1/8                          |
| EN1000   | Black  | 90,000                 | 72,000 | 180,000 | 8                    | 4.3                      | 3 5/8                   | 6                   | 2 1/2                          |

\* **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 Effect of Angle chart page 10.

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

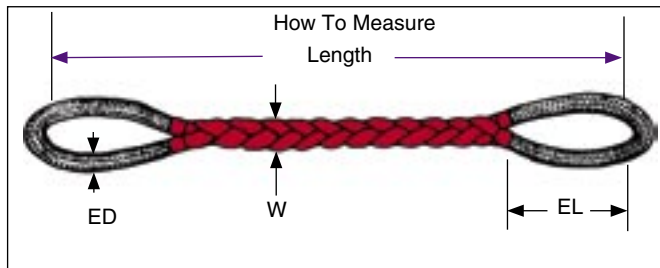
## BRAIDED TUFLEX ROUNDSLINGS

For the ultimate in big loads - (up to 612,000 lbs. in a vertical basket)  
or for the security of multiple part sling lifting.

Tuflex

### Redundant Safety

Tuflex braids are made from three [6 part] or four [8 part] individual Tuflex. Should one of these component slings be damaged while in use, the remaining undamaged slings should be able to safely return the load to the ground.



### 6 Part Flat Braid (B6E)

### Braided Tuflex Features, Advantages and Benefits

Maintains all the basic Tuflex features plus ...

#### Promotes Safety

- Braided construction offers redundant safety
- User friendly compared to steel 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, if individual slings are correctly tagged.
- Can be returned for disassembly, inspection and retagging as individual slings.

#### Saves Time

- Easy to transport and hook-up

| Part No. | 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 Dia. (ED) (in.) | Minimum Hardware Dia. ** (in.) |
| B6E30    | Purple | 6,700                  | 5,300   | 13,400  | 4 1/2                  | .8                       | 15                             | 3 1/4                   | 3/4                     | 1 3/4               | 5/8                            |
| B6E60    | Green  | 13,500                 | 10,800  | 27,000  | 5                      | 1.2                      | 15                             | 3 3/4                   | 1 1/8                   | 2                   | 1                              |
| B6E90    | Yellow | 21,400                 | 17,100  | 42,800  | 5 1/2                  | 1.6                      | 15                             | 4 1/4                   | 1 1/4                   | 2                   | 1 1/4                          |
| B6E120   | Tan    | 27,000                 | 21,600  | 54,000  | 5 1/2                  | 2.0                      | 15                             | 4 1/2                   | 1 5/16                  | 2 1/4               | 1 3/8                          |
| B6E150   | Red    | 33,600                 | 26,800  | 67,200  | 6 1/2                  | 2.7                      | 20                             | 5 1/4                   | 1 3/4                   | 2 1/2               | 1 1/2                          |
| B6E180   | White  | 42,800                 | 34,200  | 85,600  | 7                      | 3.2                      | 20                             | 5 1/2                   | 2                       | 2 3/4               | 1 3/4                          |
| B6E240   | Blue   | 54,000                 | 43,200  | 108,000 | 9                      | 4.4                      | 20                             | 6 5/8                   | 2 1/4                   | 3 1/2               | 1 3/4                          |
| B6E360   | Grey   | 79,000                 | 63,200  | 158,000 | 9 1/2                  | 6.5                      | 30                             | 8 1/4                   | 2 1/2                   | 4 1/4               | 2 1/2                          |
| B6E600   | Brown  | 135,100                | 108,000 | 270,200 | 10 1/2                 | 9.7                      | 30                             | 11                      | 2 3/4                   | 5                   | 3                              |
| B6E800   | Olive  | 168,300                | 134,600 | 336,600 | 13                     | 12.0                     | 30                             | 12                      | 4                       | 5 1/4               | 3 1/2                          |
| B6E1000  | Black  | 229,500                | 183,600 | 459,000 | 14 1/2                 | 15.6                     | 31                             | 13 1/2                  | 4 1/2                   | 5 3/4               | 4                              |

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\*\* This is the smallest recommended connection hardware diameter to be used for a vertical hitch.  
+ Shorter lengths available using reduced eye lengths.

## BRAIDED TUFLEX ROUNDSLINGS



### Order Information


Ordering length should be based on sling at rest.

Braided *Tuflex* length tolerance is  $\pm 5\%$  of the ordered length (sling at rest).

At its rated capacity, braided *Tuflex* will stretch approximately 9% and have a length variance of  $\pm 2\%$ .

Tuflex

Always use Wear Pads to protect synthetic slings from being cut by load edges.



See page 123

### 8 Part Round Braid (B8E)

| Part No. | 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 Dia. (ED) (in.) | Minimum Hardware Dia. ** (in.) |
| B8E30    | Purple | 8,800                  | 7,100   | 17,600  | 4 1/2                  | 1.1                      | 15                             | 3 1/2                   | 1                       | 1 3/4               | 3/4                            |
| B8E60    | Green  | 18,000                 | 14,400  | 36,000  | 5                      | 1.5                      | 15                             | 4                       | 1 3/8                   | 2                   | 1 1/8                          |
| B8E90    | Yellow | 28,500                 | 22,800  | 57,000  | 5 1/2                  | 2.2                      | 15                             | 4 3/4                   | 1 5/8                   | 2 1/2               | 1 1/2                          |
| B8E120   | Tan    | 36,000                 | 28,800  | 72,000  | 5 1/2                  | 2.6                      | 15                             | 5                       | 1 3/4                   | 2 1/2               | 1 1/2                          |
| B8E150   | Red    | 44,900                 | 35,900  | 89,800  | 6 1/2                  | 3.6                      | 20                             | 6                       | 2 1/8                   | 2 3/4               | 1 3/4                          |
| B8E180   | White  | 57,100                 | 45,600  | 114,200 | 7                      | 4.1                      | 20                             | 6 1/4                   | 2 1/2                   | 3 1/4               | 2                              |
| B8E240   | Blue   | 72,000                 | 57,600  | 144,000 | 9                      | 5.6                      | 20                             | 7 1/2                   | 2 3/4                   | 3 3/4               | 2                              |
| B8E360   | Grey   | 105,400                | 84,300  | 210,800 | 9 1/2                  | 8.3                      | 30                             | 9 1/2                   | 3 1/4                   | 4 1/2               | 2 1/2                          |
| B8E600   | Brown  | 180,200                | 144,100 | 360,400 | 10 1/2                 | 12.0                     | 30                             | 13                      | 3 3/4                   | 5 1/2               | 3 1/2                          |
| B8E800   | Olive  | 224,400                | 179,500 | 448,800 | 13                     | 16.0                     | 30                             | 13 1/2                  | 4 1/2                   | 6                   | 4                              |
| B8E1000  | Black  | 306,000                | 244,000 | 612,000 | 14 1/2                 | 20.0                     | 31                             | 15 3/4                  | 5 1/4                   | 6 1/2               | 4 3/4                          |

**⚠ 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 Effect of Angle chart page 10.  
 \*\* This is the smallest recommended connection hardware diameter to be used for a vertical hitch.  
 + Shorter lengths available using reduced eye lengths.

## TUFLEX EYE AND EYE

Tuflex

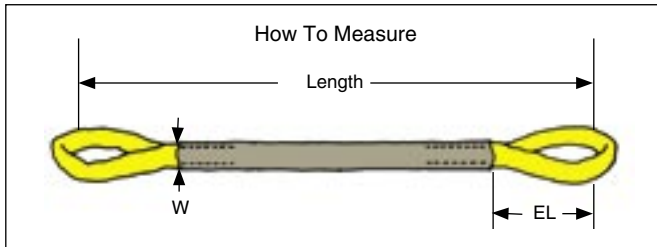
A More Rugged and Durable *Tuflex*

### The Eye and Eye Advantage

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

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

- Saves money by extending sling life where abrasion to sling body is a problem.



| Part No. | Color of Eyes | Rated Capacity (lbs.)* |        |         | Minimum Length (ft.) + | Approximate Measurements |                              |                                |                                |
|----------|---------------|------------------------|--------|---------|------------------------|--------------------------|------------------------------|--------------------------------|--------------------------------|
|          |               | Vertical               | Choker | Basket  |                        | Weight (lbs./ft.)        | Body Width at Load (W) (in.) | Standard Eye Length (EL) (in.) | Minimum Hardware Dia. ** (in.) |
| EE30     | Purple        | 2,600                  | 2,100  | 5,200   | 4                      | .25                      | 2 1/4                        | 10                             | 1/2                            |
| EE60     | Green         | 5,300                  | 4,200  | 10,600  | 4                      | .36                      | 2 1/2                        | 10                             | 5/8                            |
| EE90     | Yellow        | 8,400                  | 6,700  | 16,800  | 4                      | .50                      | 2 1/2                        | 12                             | 3/4                            |
| EE120    | Tan           | 10,600                 | 8,500  | 21,200  | 5                      | .60                      | 3 1/2                        | 12                             | 7/8                            |
| EE150    | Red           | 13,200                 | 10,600 | 26,400  | 5                      | .84                      | 3 1/2                        | 14                             | 1                              |
| EE180    | White         | 16,800                 | 13,400 | 33,600  | 7                      | .96                      | 3 1/2                        | 16                             | 1 1/8                          |
| EE240    | Blue          | 21,200                 | 17,000 | 42,400  | 7                      | 1.5                      | 4 1/4                        | 16                             | 1 1/4                          |
| EE360    | Grey          | 31,000                 | 24,800 | 62,000  | 7                      | 1.8                      | 6                            | 20                             | 1 1/2                          |
| EE600    | Brown         | 53,000                 | 42,400 | 106,000 | 8                      | 2.7                      | 7                            | 24                             | 1 7/8                          |
| EE800    | Olive         | 66,000                 | 52,800 | 132,000 | 10                     | 3.3                      | 8                            | 30                             | 2 1/8                          |
| EE1000   | Black         | 90,000                 | 72,000 | 180,000 | 12                     | 4.2                      | 9                            | 36                             | 2 1/2                          |

**⚠ WARNING**

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 \*\* This is the smallest recommended connection hardware diameter to be used for a vertical hitch.  
 + Shorter lengths available using reduced eye lengths.

## TUFLEX HARDWARE / BRIDLE SLINGS

**Features, Advantages and Benefits** Maintains all the basic *Tuflex* features plus ...

### Promotes Safety

- Bridles provide better load control and balance
- Hardware avoids cutting and abrasion of sling at bearing points

### Saves Money

- Reduced load damage - protected between pick-up point and crane hook

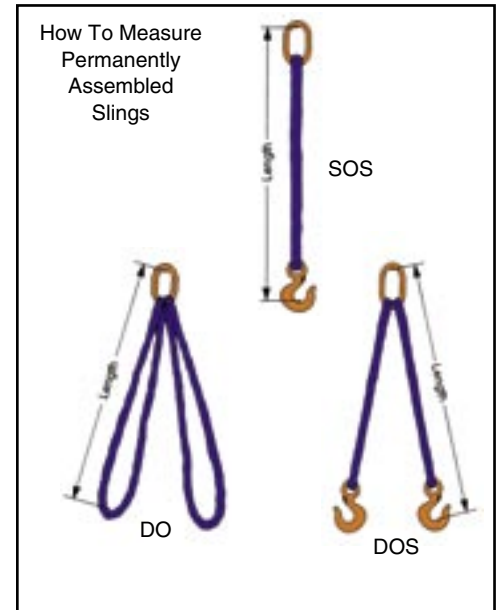
### Saves Time

- Lighter weight and easier to use and store than wire rope or chain slings
- Sling hooks quickly connect to loads having hoist rings or eye bolts



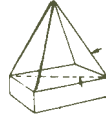
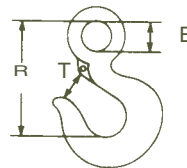
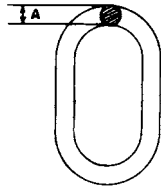
### How to Order

Specify:

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



Example:  
DOS-EN-90 X 10' is a double leg bridle, oblong master link, with sling hooks attached to each *Tuflex* EN90. Assembly length is 10 ft.

| Part No. | Color  | Rated Capacity (lbs.)*   |  |  | Sling Hook **  |                             | Oblong Link (in.)   |        |        |
|----------|--------|--|--|--|--|-----------------------------|---|--------|--------|
|          |        | <br>Single<br>@ 90°<br>Vertical | <br>Double<br>@ 60° | <br>Quad<br>@ 60° |  | E x R x T (in.)             | <br>Oblong Link Stock Dia. A (in.) |        |        |
|          |        |  |  |  |  |                             | Size  | Single | Double |
| EN30     | Purple | 2,600  | 4,500  | 9,000  | 2TA  | 1 1/8 x 4 3/32 x 1 1/16     | 1/2   | 1/2    | 3/4    |
| EN60     | Green  | 5,300  | 9,100  | 18,300   | 4.5TA  | 1 9/16 x 5 25/32 x 1 1/2    | 3/4   | 3/4    | 1 1/4  |
| EN90     | Yellow | 8,400  | 14,500   | 29,100   | 7TA  | 2 x 7 5/16 x 1 3/4          | 3/4   | 1      | 1 1/2  |
| EN120    | Tan    | 10,600   | 18,300   | 36,700   | 11TA   | 2 7/16 x 9 1/16 x 2 1/4     | 3/4   | 1 1/4  | 1 1/2  |
| EN150    | Red    | 13,200   | 22,800   | 45,700   | 11TA   | 2 7/16 x 9 1/16 x 2 1/4     | 1   | 1 1/4  | 1 3/4  |
| EN180    | White  | 16,800   | 29,100   | 58,200   | 15TA   | 2 13/16 x 10 1/32 x 2 15/32 | 1 1/4   | 1 1/2  | 2 1/4  |
| EN240    | Blue   | 21,200   | 36,700   | 73,400   | 22TA   | 3 1/2 x 12 15/32 x 3 11/32  | 1 1/4   | 1 1/2  | 2 1/4  |
| EN360    | Grey   | 31,000   | 53,700   | 107,300  | 20TC   | 3 1/2 x 14 1/16 x 4         | 1 1/2   | 2      | 2 3/4  |
| EN600    | Brown  | 53,000   | 91,800   | 183,600  | 30TC   | 4 1/16 x 20 1/8 x 4 3/4     | 2   | 2 1/2  | 3 1/2  |
| EN800    | Olive  | 66,000   | 114,300  | 228,600  | 40TC   | 5 9/16 x 23 3/4 x 5 3/4     | 2 1/4   | 3      | 4 1/4  |
| EN1000   | Black  | 90,000   | 155,800  | 311,700  |  | NA                          | 2 1/2   | 3 1/4  | 4 3/4  |

\*\* Hook sizes have been increased to conform to latest industry standards.

## WIDE-LIFT TUFLEX

Tuflex

### WIDE-LIFT TUFLEX

#### Wide Load Support and Balance

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

#### Tuflex Wide-Lift Features, Advantages and Benefits

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

##### Promotes Safety

- Wide body distributes load over wide area and offers better balance

##### 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

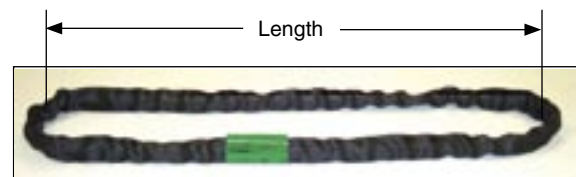
Consult factory for special requirements.



| 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                                       |

## POLYESTER STAGE SLINGS - BLACK

These lightweight roundslings are ideal for easy and inconspicuous suspension of stage sound and lighting equipment. Black sleeve material helps sling blend into its surroundings. *Lift-All* Stage Slings maintain the basic *Tuflex* features, advantages and benefits except that the color coding of the slings is achieved by using a color coded identification *Tuff-Tag*. Double Wall sleeve material is standard.



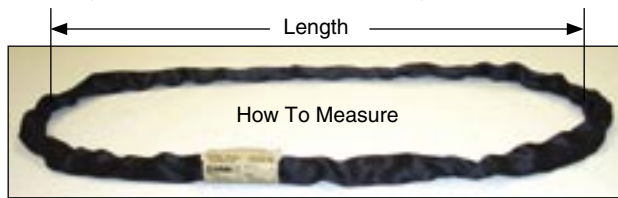
## STEELFLEX & POLYESTER STAGE SLING INFORMATION

|                       | Part No. | Rated Capacity (lbs.)* |        |        | Minimum Length (ft.) | Approximate Measurements |                         |                     |
|-----------------------|----------|------------------------|--------|--------|----------------------|--------------------------|-------------------------|---------------------|
|                       |          | Vertical               | Choker | Basket |                      | Weight (lbs. / ft.)      | Body Dia. Relaxed (in.) | Width at Load (in.) |
| Polyester Stage Sling | BS-EN30  | 2,600                  | 2,100  | 5,200  | 1 1/2                | .2                       | 5/8                     | 1 1/8               |
|                       | BS-EN60  | 5,300                  | 4,200  | 10,600 | 1 1/2                | .3                       | 7/8                     | 1 1/2               |
|                       | BS-EN90  | 8,400                  | 6,700  | 16,800 | 3                    | .4                       | 1 1/8                   | 1 7/8               |
| Steelflex             | GAC-EN60 | 5,300                  | 4,200  | 10,600 | 3**                  | .75                      | 7/8                     | 1 1/2               |

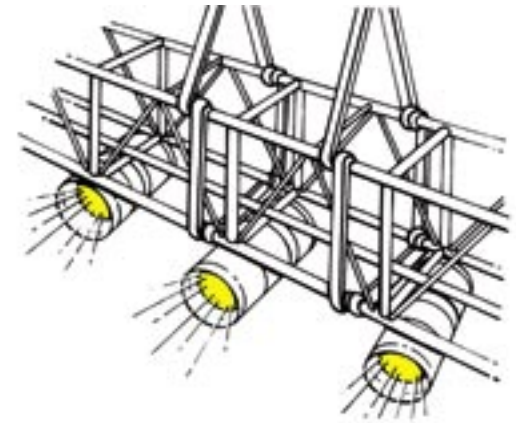
\* **WARNING** Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to Effect of Angle chart page 10.  
\*\* Maximum length for Steelflex is 9 ft.

## STEELFLEX ROUNDSLINGS

**THE STEEL SLING  
WITH THE FABRIC FEEL**  
(U.S Patent No. 6422624 )



GAC-EN60



Tufflex

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

Designed for Suspension Applications where metal slings are required.

With the trend in stage rigging to require metal slings for all overhead suspension, the problem has been how to accomplish this in the most efficient and cost effective way. *STEELFLEX ROUNDSLINGS* are the answer to that problem!

The load-bearing member of *STEELFLEX ROUNDSLINGS* is made from 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.

The benefits are many:

### Increased Safety

- Improved cut resistance
- Higher heat resistance
- Conforms to load to grip securely
- Window allows complete core inspection

### Saves Time

- No backup rigging required
- Fewer components to inventory and carry
- Superior flexibility makes rigging easy
- Tan colored Tuff-Tag confirms steel core

### Saves Money

- Gives you the slings you want to use (roundslings), without having to buy the slings you would be required to use (wire rope or chain)
- Lowers show to show freight costs



Inspection Window

## THE STRONGEST AND LIGHTEST SLINGS IN THE WORLD

Rigging injuries decrease when lighter, less cumbersome slings are used. Light, flexible **KeyFlex™** Roundslings help prevent injuries.

Tuflex

### Sling Weights per Capacities

On the average, **KeyFlex™** Roundslings are:

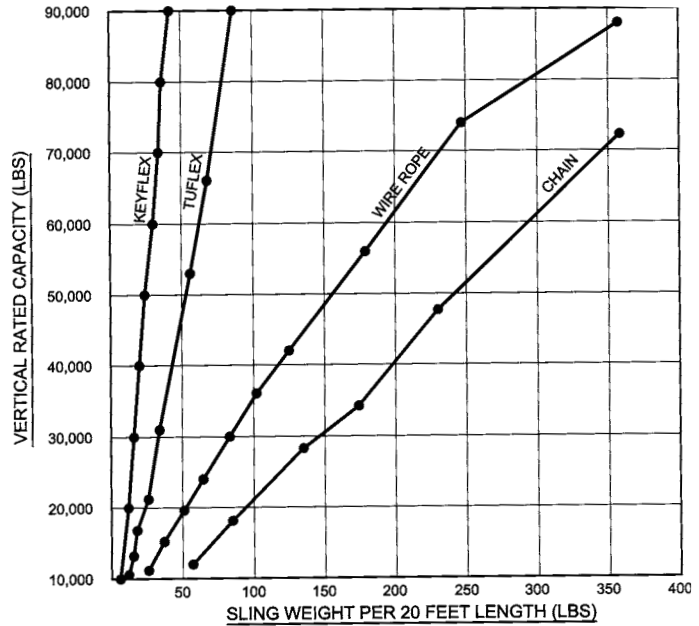
- 53% lighter than **Tuflex™** Roundslings,
- 82% lighter than Wire Rope Slings,
- 89% lighter than G80 Chain Slings

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

| Sling Type      | Vert. Rating | Weight   |
|-----------------|--------------|----------|
| <b>KeyFlex™</b> | 90,000 lbs.  | 42 lbs.  |
| <b>Tuflex™</b>  | 90,000 lbs.  | 86 lbs.  |
| Wire Rope       | 88,000 lbs.  | 357 lbs. |
| Chain           | 72,300 lbs.  | 358 lbs. |

### KeyFlex™ Benefits:

- Lowest weight per capacity reduces risk of back and other injuries to riggers.
- Low stretch (1% at rated capacity) reduces elastic bounce for better load control – allows for use in most low headroom situations – reduces sling and load abrasion.
- 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.



### KeyFlex™ Capacities and Measurements

| Part No. | Rated Capacity (lbs.)* |         |         | Minimum Length (ft.) | Approximate Measurements |                         |                     |                             |
|----------|------------------------|---------|---------|----------------------|--------------------------|-------------------------|---------------------|-----------------------------|
|          | Vertical               | Choker  | Basket  |                      | Weight (lbs. / ft.)      | Body Dia. Relaxed (in.) | Width at Load (in.) | Minimum Hardware Dia. (in.) |
| KEN10K   | 10,000                 | 8,000   | 20,000  | 3                    | .3                       | 1                       | 1 3/4               | 7/8                         |
| KEN15K   | 15,000                 | 12,000  | 30,000  | 3                    | .5                       | 1 1/8                   | 2                   | 1                           |
| KEN20K   | 20,000                 | 16,000  | 40,000  | 3                    | .6                       | 1 1/4                   | 2 1/4               | 1 1/4                       |
| KEN25K   | 25,000                 | 20,000  | 50,000  | 3                    | .7                       | 1 1/4                   | 2 1/2               | 1 3/8                       |
| KEN30K   | 30,000                 | 24,000  | 60,000  | 8                    | .8                       | 1 3/8                   | 2 3/4               | 1 1/2                       |
| KEN40K   | 40,000                 | 32,000  | 80,000  | 8                    | 1.0                      | 1 3/4                   | 3                   | 1 1/2                       |
| KEN50K   | 50,000                 | 40,000  | 100,000 | 10                   | 1.3                      | 1 7/8                   | 3 1/2               | 1 3/4                       |
| KEN60K   | 60,000                 | 48,000  | 120,000 | 10                   | 1.7                      | 2                       | 3 3/4               | 2                           |
| KEN70K   | 70,000                 | 56,000  | 140,000 | 10                   | 1.9                      | 2 1/8                   | 4                   | 2 1/2                       |
| KEN80K   | 80,000                 | 64,000  | 160,000 | 10                   | 2.1                      | 2 1/4                   | 4 1/4               | 2 1/2                       |
| KEN90K   | 90,000                 | 72,000  | 180,000 | 10                   | 2.4                      | 2 1/2                   | 4 3/4               | 2 1/2                       |
| KEN100K  | 100,000                | 80,000  | 200,000 | 10                   | 2.6                      | 2 3/4                   | 5                   | 2 1/2                       |
| KEN125K  | 125,000                | 100,000 | 250,000 | 10                   | 3.0                      | 3                       | 5 1/4               | 3                           |
| KEN150K  | 150,000                | 120,000 | 300,000 | 10                   | 3.5                      | 3 1/4                   | 5 1/2               | 3 1/2                       |
| KEN175K  | 175,000                | 140,000 | 350,000 | 10                   | 4.0                      | 3 1/2                   | 6                   | 3 1/2                       |
| KEN200K  | 200,000                | 160,000 | 400,000 | 10                   | 4.5                      | 3 3/4                   | 6 1/4               | 3 1/2                       |

## 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
- No loss of strength from abrasion on double walled jacket
- *Tuff-Tag*™ provides serial numbered identification for traceability
- Conforms to shape of load to grip securely
- Load bearing yarns protected from UV degradation
- Contrasting color core yarns provide visual warning of sling damage  
(**KeyFlex™** : Orange jacket, 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
- End fittings are pitted or corroded, cracked, distorted or broken
- The sling shows signs of melting, charring or chemical damage
- Capacity tag is illegible or missing
- Other visible damage causes doubt as to strength of the sling

#### Environmental Considerations

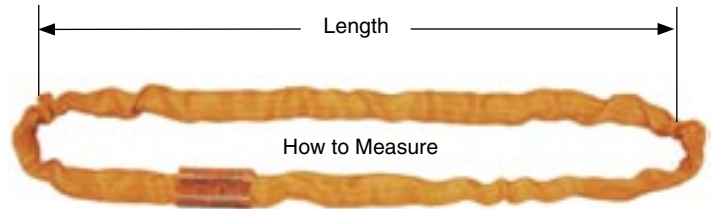
- **CHEMICAL** - Do not use in a chemical environment without first contacting the Lift-All engineering department at 717-898-6615. Please provide specific chemical, concentration, temperature and time factors.
- **TEMPERATURE** –**KeyFlex™** are approved for use up to 350° F.
- **WARNING:** These products may contain chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

#### 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 – no sewn edges to rupture prematurely, requiring removal from service
- *Tufhide* wear resistant nylon jacket for extra sling life standard KEN60K and larger sizes
- *Tuff-Tag* provides required OSHA information for life of the sling, not just the life of the tag
- 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™** are made to a tolerance of  $\pm 1\%$  of the specified length ( $\pm 1''$  minimum tolerance) and can stretch 1% at rated capacity.

*Note: Matched lengths of slings must be specified at time of order. Available in endless style only.*



#### WARNING

Always protect Roundslings from being cut or damaged by corners, edges or protrusions. Refer to wear pads section, page 123 for available protective devices.