The Tuflex Difference

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

What is a Tuflex Roundsling?

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 roundsling 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 Roundslings 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

Always protect synthetic slings from being cut by corners and edges.

Follow temperature and chemical information found on page 24.

See page 14
**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

**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

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.

Roundsling 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.

### HOW TO ORDER

**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.

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

Endless and Eye & Eye styles of Tuflex are made to a tolerance of $\pm \left(1'' + 1\% \text{ of the specified length}\right)$ and can stretch 3% at rated capacity.

Braided Tuflex length tolerance is $\pm \left(2'' + 5\% \text{ of the ordered length}\right)$ (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.
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 signal that sling protection must be added or improved.

Exposure of slings to edges

WARNING

Exposure of roundslings to edges with a radius that is too small can cause sling failure and loss of load

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.

<table>
<thead>
<tr>
<th>Vertical Rated Capacity (lbs.)</th>
<th>Minimum * Edge Radii (in.)</th>
<th>Sling Width at Load (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN30</td>
<td>3/16</td>
<td>1</td>
</tr>
<tr>
<td>EN60</td>
<td>1/4</td>
<td>1 3/8</td>
</tr>
<tr>
<td>EN90</td>
<td>5/16</td>
<td>1 3/4</td>
</tr>
<tr>
<td>EN120</td>
<td>5/16</td>
<td>1 7/8</td>
</tr>
<tr>
<td>EN150</td>
<td>3/8</td>
<td>2</td>
</tr>
<tr>
<td>EN180</td>
<td>7/16</td>
<td>2 1/8</td>
</tr>
<tr>
<td>EN240</td>
<td>7/16</td>
<td>2 5/8</td>
</tr>
<tr>
<td>EN360</td>
<td>1/2</td>
<td>3 1/4</td>
</tr>
<tr>
<td>EN600</td>
<td>11/16</td>
<td>4</td>
</tr>
<tr>
<td>EN800</td>
<td>3/4</td>
<td>4 5/8</td>
</tr>
<tr>
<td>EN1000</td>
<td>7/8</td>
<td>5 1/4</td>
</tr>
</tbody>
</table>

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

Sling Hardware and Connections

Connection surfaces must be smooth to avoid abrading or cutting roundslings. Roundslings can also be damaged or weakened by excessive compression between the sling and the connection points if the size of the attachment hardware or connection area is not large enough to avoid this damage. Select and use proper connection hardware that conforms to the size requirements listed for choker and vertical hitches, or for 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 roundsling is less than its capacity)

Minimum hardware dimensions suitable for use with roundslings.

<table>
<thead>
<tr>
<th>Tuflex Size</th>
<th>Single Part</th>
<th>Double Part</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min. Stock Dia. (In.)</td>
<td>Min. Width (In.)</td>
</tr>
<tr>
<td>EN30</td>
<td>7/16</td>
<td>1</td>
</tr>
<tr>
<td>EN60</td>
<td>5/8</td>
<td>1 3/8</td>
</tr>
<tr>
<td>EN90</td>
<td>3/4</td>
<td>1 3/4</td>
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<tr>
<td>EN120</td>
<td>7/8</td>
<td>1 7/8</td>
</tr>
<tr>
<td>EN150</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>EN180</td>
<td>1 1/8</td>
<td>2 1/8</td>
</tr>
<tr>
<td>EN240</td>
<td>1 3/16</td>
<td>2 5/8</td>
</tr>
<tr>
<td>EN360</td>
<td>1 1/2</td>
<td>3 1/4</td>
</tr>
<tr>
<td>EN600</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>EN800</td>
<td>2 1/8</td>
<td>4 5/8</td>
</tr>
<tr>
<td>EN1000</td>
<td>2 1/2</td>
<td>5 1/4</td>
</tr>
</tbody>
</table>

** For hardware connected to the body of Eye & Eye Tuflex, use the Double Part columns.
**Tuflex Roundslings**

**DIRECT CONNECT HOOKS™**

**DC 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 needed.

For Tuflex, just match the color coded hook to the same color Tuflex and you’re ready to go. Rated capacities are the same for both the hook and the Tuflex.

**Features:**

- Rugged – Both alloy steel hook and latch are forged for superior toughness.
- Color coded – Hook color matches Tuflex color for easy identification
- 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 (see chart below)

**Benefits:**

- Improves Safety – Color coding to match Tuflex colors reduces chance of using wrong size hook
- Saves Time – Quick connections; no tools needed
- Saves Money – Adds versatility to your existing slings. No need to buy expensive hardware slings

<table>
<thead>
<tr>
<th>Lift-All Part #</th>
<th>Color</th>
<th>Rated Cap. (lbs.)</th>
<th>Tuflex</th>
<th>Web Slings</th>
<th>Weight (lbs.)</th>
<th>E (in.)</th>
<th>R (in.)</th>
<th>T (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCH1</td>
<td>Purple</td>
<td>2,600</td>
<td>EN30</td>
<td>1</td>
<td>1.5</td>
<td>1 9/16</td>
<td>3 3/8</td>
<td>1</td>
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<tr>
<td>DCH2</td>
<td>Green</td>
<td>5,300</td>
<td>EN60</td>
<td>1</td>
<td>2.7</td>
<td>1 3/4</td>
<td>4</td>
<td>1 5/16</td>
</tr>
<tr>
<td>DCH3</td>
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<td>8,400</td>
<td>EN90</td>
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<td>4 5/8</td>
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<tr>
<td>DCH4</td>
<td>Red</td>
<td>13,200</td>
<td>EN150</td>
<td>-</td>
<td>9.9</td>
<td>2 3/4</td>
<td>5 3/4</td>
<td>1 3/4</td>
</tr>
</tbody>
</table>
**TUFLEX ENDLESS ROUNDSLINGS**

**Tuflex Endless (EN)**  
The Most Versatile Tuflex Roundsling

**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

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**How To Measure**

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 12.

**WARNING**

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

**TUFLEX EYE AND EYE**

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.

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**How To Measure**

![Diagram of how to measure](Image)

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### How To Measure

- **Length**
- **W**
- **EL**

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### Part No. | Color of Eyes | Rated Capacity (lbs.)* | Approximate Measurements
| --- | --- | --- | ---
| **Vertical** | **Choker** | **Basket @ 90°** | **Basket @ 45°** | **Minimum Length (ft.)** | **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 | 3,600 | 4 | .25 | 2 1/4 | 10 | 7/16
| EE60 | Green | 5,300 | 4,200 | 10,600 | 7,400 | 4 | .36 | 2 1/2 | 10 | 5/8
| EE90 | Yellow | 8,400 | 6,700 | 16,800 | 11,800 | 4 | .50 | 2 1/2 | 12 | 3/4
| EE120 | Tan | 10,600 | 8,500 | 21,200 | 14,000 | 5 | .60 | 3 1/2 | 12 | 7/8
| EE150 | Red | 13,200 | 10,600 | 26,400 | 18,000 | 5 | .84 | 3 1/2 | 14 | 1
| EE180 | White | 16,800 | 13,400 | 33,600 | 23,000 | 7 | .96 | 3 1/2 | 16 | 1 1/8
| EE240 | Blue | 21,200 | 17,000 | 42,400 | 29,000 | 7 | 1.5 | 4 1/4 | 16 | 1 3/16
| EE360 | Grey | 31,000 | 24,800 | 62,000 | 43,000 | 7 | 1.8 | 6 | 20 | 1 1/2
| EE600 | Brown | 53,000 | 42,400 | 106,000 | 74,000 | 8 | 2.7 | 7 | 24 | 2
| EE800 | Olive | 66,000 | 52,800 | 132,000 | 93,000 | 10 | 3.3 | 8 | 30 | 2 1/8
| EE1000 | Black | 90,000 | 72,000 | 180,000 | 127,000 | 12 | 4.2 | 9 | 36 | 2 1/2

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**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 12.

**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

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

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.

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

6 Part Flat Braid (B6E)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
<th>Approximate Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Vertical</td>
<td>Choker</td>
</tr>
<tr>
<td>B6E30</td>
<td>Purple</td>
<td>6,700</td>
<td>5,300</td>
</tr>
<tr>
<td>B6E60</td>
<td>Green</td>
<td>13,500</td>
<td>10,800</td>
</tr>
<tr>
<td>B6E90</td>
<td>Yellow</td>
<td>21,400</td>
<td>17,100</td>
</tr>
<tr>
<td>B6E120</td>
<td>Tan</td>
<td>27,000</td>
<td>21,600</td>
</tr>
<tr>
<td>B6E150</td>
<td>Red</td>
<td>33,600</td>
<td>26,800</td>
</tr>
<tr>
<td>B6E180</td>
<td>White</td>
<td>42,800</td>
<td>34,200</td>
</tr>
<tr>
<td>B6E240</td>
<td>Blue</td>
<td>54,000</td>
<td>43,200</td>
</tr>
<tr>
<td>B6E360</td>
<td>Grey</td>
<td>79,000</td>
<td>63,200</td>
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<tr>
<td>B6E600</td>
<td>Brown</td>
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<td>108,000</td>
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<tr>
<td>B6E800</td>
<td>Olive</td>
<td>168,300</td>
<td>134,600</td>
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<tr>
<td>B6E1000</td>
<td>Black</td>
<td>229,500</td>
<td>183,600</td>
</tr>
</tbody>
</table>

* 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 12.

** 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 ± (2" + 5% of the ordered length) (sling at rest).

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

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Always protect synthetic slings from being cut by corners and edges.

See page 14

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8 Part Round Braid (B8E)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>B8E30</td>
<td>Purple</td>
<td>8,800</td>
<td>B8E60</td>
<td>Green</td>
<td>18,000</td>
<td>B8E90</td>
<td>Yellow</td>
<td>28,500</td>
</tr>
<tr>
<td>B8E120</td>
<td>Tan</td>
<td>36,000</td>
<td>B8E150</td>
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<td>B8E180</td>
<td>White</td>
<td>57,100</td>
</tr>
<tr>
<td>B8E240</td>
<td>Blue</td>
<td>72,000</td>
<td>B8E360</td>
<td>Grey</td>
<td>105,400</td>
<td>B8E600</td>
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<td>180,200</td>
</tr>
<tr>
<td>B8E800</td>
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<td>224,400</td>
<td>B8E1000</td>
<td>Black</td>
<td>306,000</td>
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### Part No. Color

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<tr>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>B8E30</td>
<td>Purple</td>
<td>8,800</td>
<td>B8E60</td>
<td>Green</td>
<td>18,000</td>
<td>B8E90</td>
<td>Yellow</td>
<td>28,500</td>
</tr>
<tr>
<td>B8E120</td>
<td>Tan</td>
<td>36,000</td>
<td>B8E150</td>
<td>Red</td>
<td>44,900</td>
<td>B8E180</td>
<td>White</td>
<td>57,100</td>
</tr>
<tr>
<td>B8E240</td>
<td>Blue</td>
<td>72,000</td>
<td>B8E360</td>
<td>Grey</td>
<td>105,400</td>
<td>B8E600</td>
<td>Brown</td>
<td>180,200</td>
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<tr>
<td>B8E800</td>
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<td>B8E1000</td>
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### Approximate Measurements

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<tr>
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<th>Rated Capacity (lbs.)*</th>
<th>Part No.</th>
<th>Color</th>
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<th>Part No.</th>
<th>Color</th>
<th>Rated Capacity (lbs.)*</th>
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</thead>
<tbody>
<tr>
<td>B8E30</td>
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<td>8,800</td>
<td>B8E60</td>
<td>Green</td>
<td>18,000</td>
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<tr>
<td>B8E120</td>
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<tr>
<td>B8E240</td>
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<td>105,400</td>
<td>B8E600</td>
<td>Brown</td>
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<tr>
<td>B8E800</td>
<td>Olive</td>
<td>224,400</td>
<td>B8E1000</td>
<td>Black</td>
<td>306,000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Columns

- **Vertical Choker Basket**: Minimum Length (ft.) +
- **Rated Capacity (lbs.)**: Standard Eye Length (EL) (in.)
- **Minimum Hardware Dia.**: Weight (lbs./ft.)
- **Capacity (lbs.)**: Width at Load (in.)
- **Approximate Measurements**: Thickness at Load (in.)
- **Rated Capacity (lbs.)**: Eye Dia. (ED) (in.)
- **Minimum Hardware Dia.**: Minimum Hardware Dia. (in.)

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*WARNING*

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases.
Sling should not be used at angles of less than 30°.
Refer to Effect of Angle chart page 12.
**This is the smallest recommended connection hardware diameter to be used for a vertical hitch.
+ Shorter lengths available using reduced eye lengths.
KeyFlex™ ARAMID ROUNDSLINGS

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.

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:

<table>
<thead>
<tr>
<th>Sling Type</th>
<th>Vert. Rating</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>KeyFlex™</td>
<td>90,000 lbs.</td>
<td>42 lbs.</td>
</tr>
<tr>
<td>Tuflex™</td>
<td>90,000 lbs.</td>
<td>86 lbs.</td>
</tr>
<tr>
<td>Wire Rope</td>
<td>88,000 lbs.</td>
<td>357 lbs.</td>
</tr>
<tr>
<td>Chain</td>
<td>72,300 lbs.</td>
<td>358 lbs.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Rated Capacity (lbs.)*</th>
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<th>Basket @ 45°</th>
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<th>Width at Load (in.)</th>
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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

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
- Tuffhide 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, 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.

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 that 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.

Ordering Information
Specify the sling code and length in feet (bearing point to bearing point).
KeyFlex™ are made to a tolerance of ±(1” + 1% of the specified length) 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 corners, edges or protrusions.
Refer to wear pads section, page 14 for available protective devices.
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

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

<table>
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<tr>
<th>Polyester Stage Sling</th>
<th>Part No.</th>
<th>Vertical Capacity (lbs.)</th>
<th>Choker Capacity (lbs.)</th>
<th>Basket Capacity (lbs.)</th>
<th>Minimum Length (ft.)</th>
<th>Weight (lbs./ft.)</th>
<th>Body Dia. Relaxed (in.)</th>
<th>Width at Load (in.)</th>
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**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

---

**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 12.

**Maximum length for Steelflex is 9 ft.**

---

69
Tuflex Roundslings

Features, Benefits and Advantages

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:
DOSEN90 X 10’ is a double leg bridle, oblong master link, with sling hooks attached to each Tuflex EN90. Assembly length is 10 ft.

*Tuflex Hardware / Bridle Slings*

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One Leg @ 90°

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All Legs @

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SINGLE

DOUBLE

TRIPLE

QUAD

*See hardware dimension charts on page 91.
Use sling leg calculator to determine length @ www.lift-all.com
INSPECTION CRITERIA FOR TUFLEX / KEYFLEX

The following photos illustrate some of the common damage that occurs and indicates that the sling must be taken out of service. For inspection frequency requirements, see page 7.

THE DAMAGE: Cuts to the cover exposing internal core yarns – When internal core yarns are visible, the amount of damage done to the core yarns and the sling strength cannot be determined without breaking the sling. Therefore, the sling must be taken out of service.

WHAT TO LOOK FOR: Broken fibers of equal length indicate that the sling has been cut by an edge.

TO PREVENT: Always protect synthetic slings from being cut by corners and edges by using wear pads or other devices.

THE DAMAGE: Abrasion exposing internal core yarns.

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

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

THE DAMAGE: Holes/Snags/Pulls exposing internal core yarns.

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

TO PREVENT: Avoid sling contact with protrusions, both during lifts and while transporting or storing.
INSPECTION CRITERIA FOR TUFLEX / KEYFLEX

THE DAMAGE: Heat/Chemical

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

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

THE DAMAGE: Knots compromise the strength of all slings by not allowing all fibers to contribute to the lift as designed.

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

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

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

WHAT TO LOOK FOR: If you cannot find or read all of the information on a sling tag, the sling shall 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.

THE DAMAGE: Cuts to the cover NOT exposing internal core yarns –Tuflex roundslings all have a double walled jacket protecting the inner core yarns from damage. If damage (except for chemical or heat) appears only to the outer jacket and does not expose the inner core yarns, the sling may remain in service. To extend sling life, the sling may be returned to Lift-All for inspection and application of a patch to cover the damaged area.

WHAT TO LOOK FOR: Broken fibers of equal length indicate that the sling has been cut by an edge. In this case, the inner jacket remains intact.

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