

Cut Protection

EDGE DEFENDER™ Flat Type Cut Protection Pads (Code: ED)

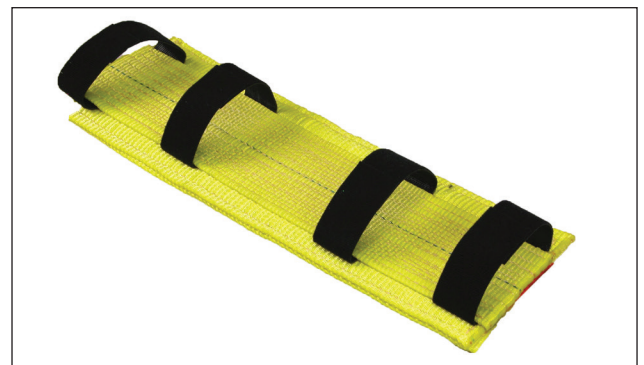
US Patent 9,579,996
Canadian Patent 2,900,438

Sling
Protection

The *Edge Defender* product line is patented technology. Constructed with multiple layers of protection material with *Kevlar*® aramid binding, the *Edge Defender* has become the new standard in edge cut protection technology for guarding synthetic slings. Protect your loads and your slings now by using the *Lift-All Edge Defender*!



- **Cut Protection:** The patented technology creates a high level of compression on the surface to produce a superior level of cut protection.
- **Conforms to the Shape of Load Edges:** The flat design will conform to the load shape during handling operations, yet the construction is firm enough to prevent wrinkling.
- **Construction Materials:** *Edge Defender* is made of polyester with *Kevlar* aramid binding.
- **Ease of Attachment:** The use of hook and loop straps allow quick attachment and helps to hold position on slings.
- **Ease of Sling Inspection:** The open design allows easy access to slings during frequent inspections.
- **Available Sizes:** Available in a variety of lengths and widths.



Standard Pad Widths and Maximum Appropriate Sling Sizes				Part Numbers for Standard <i>Edge Defender</i> Lengths				
Pad Width (In.)	Maximum Web Sling Width (in.)	Maximum Tuflex Size	Maximum KeyFlex Size	12-inch	18-inch	24-inch	30-inch	36-inch
3	2	EN30	n/a	ED3X12IN	ED3X18IN	ED3X24IN	ED3X30IN	ED3X36IN
4	3	EN60	n/a	ED4X12IN	ED4X18IN	ED4X24IN	ED4X30IN	ED4X36IN
6	4	EN150	KEN20K	ED6X12IN	ED6X18IN	ED6X24IN	ED6X30IN	ED6X36IN
8	6	EN240	KEN50K	ED8X12IN	ED8X18IN	ED8X24IN	ED8X30IN	ED8X36IN
10	8	EN600	KEN90K	ED10X12IN	ED10X18IN	ED10X24IN	ED10X30IN	ED10X36IN

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Edge Defender Flex Plus™ Flat Style Cut Protection (Code: FQSD)

US Patent 9,579,996
Canadian Patent 2,900,438

Our new *Edge Defender Flex Plus* made with *Dyneema*™ fiber is woven to provide cut protection for a variety of edges and surfaces. The 'Flex Plus' is the addition of a double-ply layer of *Dyneema* with *Kevlar*® aramid binding. These pads are thinner, lighter, and more flexible than the standard *Lift-All Edge Defender*, yet maintain the same level of cut protection performance. The *Edge Defender Flex Plus* is well suited for handling loads with a straight, curved or non-uniform shaped edge, including coil handling applications.



Features and Benefits

Lighter and More Flexible: The patented *Edge Defender Flex Plus* technology creates a high level of compression on the interior surface to produce a superior level of cut protection. With the use of high modulus *Dyneema* material, this lighter 'Flex Plus' version of the flat *Edge Defender* is almost twice as flexible and maintains the same high level cut protection performance.

Construction Materials: The *Edge Defender Flex Plus* is made of *Dyneema* and polyester material with *Kevlar* aramid binding.

Ease of Attachment: Hook and loop straps allow quick attachment and helps to keep position on slings.

Ease of Inspection: The open design allows easy access to slings during their frequent inspections.

Available Sizes: Available in a variety of lengths and widths.

Standard Pad Widths and Maximum Sling Sizes				<i>Edge Defender Flex Plus</i> Flat Quick Sleeves				
Pad Width (In.)	Web Sling Width (in.)	Tuflex*	KeyFlex*	1-FT	18-INCH	2-FT	30-INCH	3-FT
3	2	EN30	—	3FQSDX1	3FQSDX18IN	3FQSDX2	3FQSDX30IN	3FQSDX3
6	4	EN150	KEN20K	6FQSDX1	6FQSDX18IN	6FQSDX2	6FQSDX30IN	6FQSDX3
9	6	EN240	KEN50K	9FQSDX1	9FQSDX18IN	9FQSDX2	9FQSDX30IN	9FQSDX3
10	8	EN600	KEN80K	10FQSDX1	10FQSDX18IN	10FQSDX2	10FQSDX30IN	10FQSDX3
12	10	EN1000	KEN120K	12FQSDX1	12FQSDX18IN	12FQSDX2	12FQSDX30IN	12FQSDX3

* Maximum recommended size is shown.

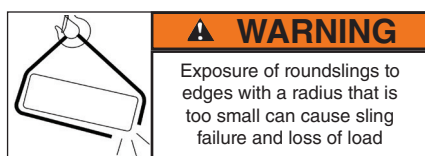
USING TUFLEX ROUNDSLINGS

Protect Sling from Damage

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

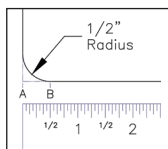
Do not ignore warning signs of misuse. **Cut marks detected during any sling inspection serve as a clear indication that cut protection is needed.** Refer to Sling Protection section of our catalog.

Exposure of slings to edges



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.



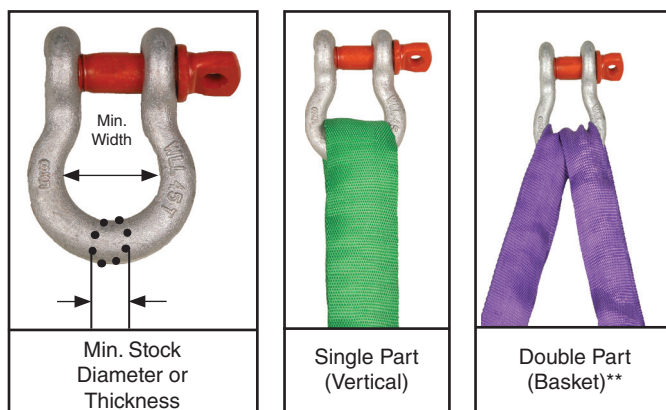
Minimum Edge Radii suitable for contact with unprotected polyester roundslings		
Rated Capacity Vertical (lbs.)	Minimum* Edge Radii (in.)	Sling Width At Load (in.)
EN30	3/16	1.00
EN60	1/4	1.38
EN90	5/16	1.75
EN120	5/16	1.88
EN150	3/8	2.00
EN180	7/16	2.13
EN240	7/16	2.63
EN360	1/2	3.25
EN600	11/16	4.00
EN800	3/4	4.63
EN1000	7/8	5.25

*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 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	7/16	1.00	9/16	1.38
EN60	5/8	1.38	7/8	1.88
EN90	3/4	1.75	1-1/16	2.38
EN120	7/8	1.88	1-1/4	2.50
EN150	1	2.00	1-3/8	2.88
EN180	1-1/8	2.13	1-5/8	3.00
EN240	1-3/16	2.63	1-5/8	3.75
EN360	1-1/2	3.25	2	4.50
EN600	2	4.00	2-3/4	5.63
EN800	2-1/8	4.63	3	6.50
EN1000	2-1/2	5.25	3-1/2	7.38

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

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

DIRECT CONNECT HOOKS

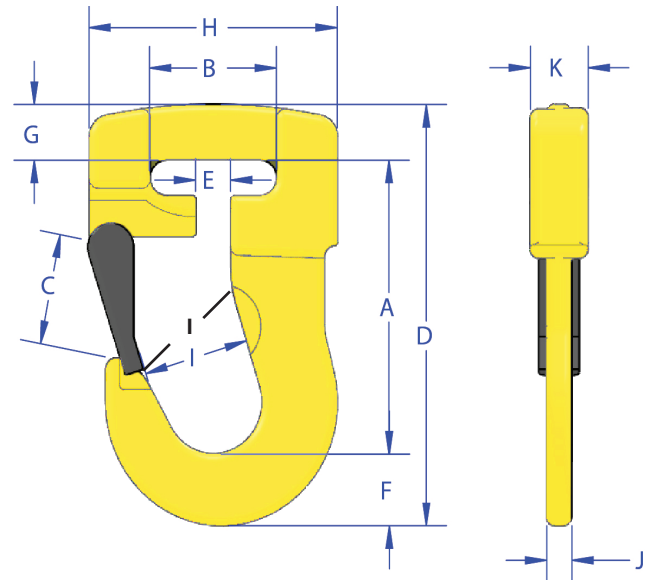
Direct Connect hooks are the quickest and easiest way to add hooks to *Tuflex* roundslings and web slings at your job site. No tools or extra parts are needed.

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* roundsling.



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 ROUNDSLINGS

Tuflex Endless

The Most Versatile *Tuflex* Roundsling

Features and Benefits

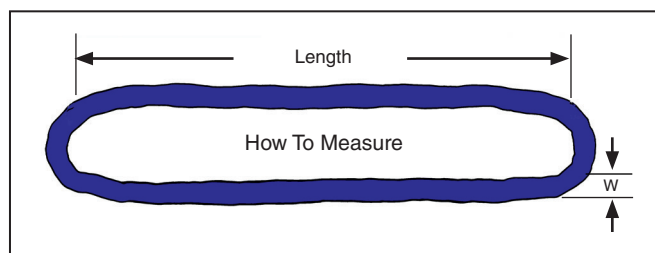
Maintains all the basic *Tuflex* features plus...

Promotes Safety

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

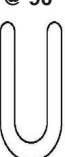
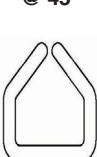
Saves Money

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



Round
Slings

TUFLEX ENDLESS ROUNDSLINGS

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					1.50	.2	0.63	1.00	0.44
EN60	Green					1.50	.3	0.88	1.38	0.63
EN90	Yellow					3.00	.5	1.13	1.75	0.75
EN120	Tan					3.00	.6	1.13	1.88	0.88
EN150	Red					3.00	.8	1.38	2.00	1.00
EN180	White					3.00	.9	1.38	2.13	1.13
EN240	Blue					3.00	1.3	1.75	2.63	1.19
EN360	Gray					3.00	1.7	2.25	3.25	1.50
EN600	Brown					8.00	2.8	2.75	4.00	2.00
EN800	Olive					8.00	3.4	3.13	4.63	2.13
EN1000	Black					8.00	4.3	3.63	5.25	2.50

** 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 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.

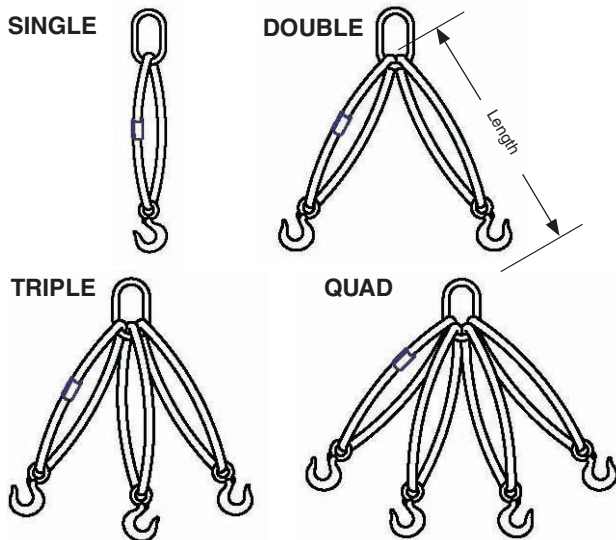
How to Order

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

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