GLOBAL

RIGGING AND SYNTHETICS

WIRE ROPE • CHAIN • SLINGS • TESTING

CATALOG

globalriggingllc.com

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OVERVIEW

At **Global Rigging and Synthetics, LLC**, we boast a seasoned team with a cumulative 100 years of mastery in wire rope, chain, slings, testing, and synthetic rope.

Quality is the cornerstone of our operations. We implement rigorous quality control at every production phase, ensuring excellence from materials receipt to the final delivery inspection, guaranteeing only the finest products reach your hands.

Our commitment to product quality is unwavering, with meticulous quality checks at every stage—from receipt to delivery. Our state-of-the-art equipment and substantial inventory underscore our pledge to meet all your rigging and load-securing needs. We prioritize first-rate customer service and timely delivery, striving to earn the confidence of our clients globally.

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OVERVIEW

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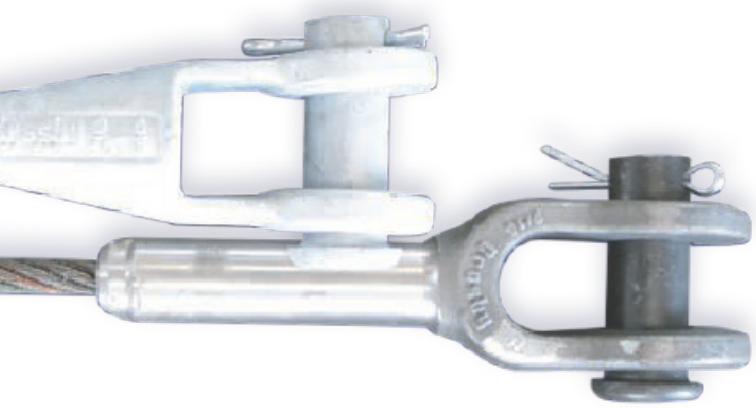
The capacities for wire rope slings and assemblies detailed in this catalog adhere to the universally recognized industry standard, utilizing a 5 to 1 design factor. This standard outlines the procedure for calculating the Working Load Limit (WLL) of a sling, which involves the Minimum Breaking Strength (MBL) of the wire rope, multiplied by the efficiency of the splice or end fittings, all divided by a design factor of 5.

Several critical factors influence the capacity of a wire rope sling, including:

- The efficiency of the end termination or eye splice.
- The type of hitch employed during the lifting process.
- The diameter of the item to which the sling is attached during lifting.
- The diameter of the hook or shackle used for connecting the sling to the lifting mechanism.

EFFICIENCY OF THE END TERMINATION OR EYE SPLICE



Mechanical spliced eyes:

Rope Diameter (IWRC)	Efficiency
1/4" to 1"	**95%**
1-1/8" to 2"	**92.5%**
2-1/4" to 4-1/2"	**90%**

Swage and spelter sockets:

Rope Diameter	Efficiency
1/4" to 4-1/2"	**100%**

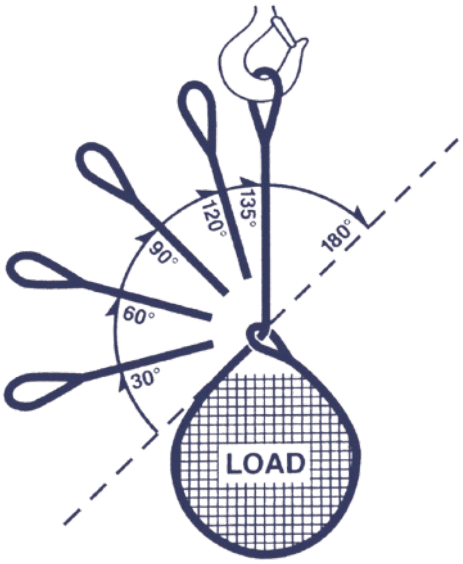
TYPE OF HITCH BEING USED WHEN LIFTING THE LOAD:

Vertical Pull:

A vertical pull is when a sling is hitched in a straight line between the lifting device and load to lift it vertically. It is crucial to use appropriate rigging and equipment rated for the load to prevent accidents and ensure safety.

Choker Hitch:

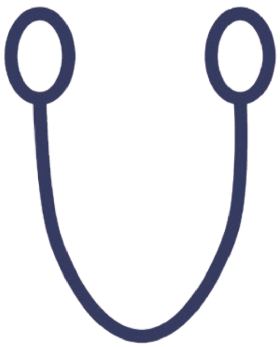
A choker hitch involves passing the eye on one end of the sling through the eye on the other end and choking the sling around the load. It's important to note that a sling used in a choker hitch has a reduced capacity, as shown in the chart below.



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

Vertical Basket Hitch:

A vertical basket hitch is where the body of the sling supports the load being lifted and the two ends of the sling are attached to the lifting device.



SLING CAPACITIES WHEN RIGGED AT VARIOUS ANGLES

Load Factor Guidelines

Leg Angle	Load Factor
90°	**1.000**
85°	**1.003**
80°	**1.015**
75°	**1.035**
70°	**1.064**
65°	**1.103**
60°	**1.154**
55°	**1.220**
50°	**1.305**
45°	**1.414**
40°	**1.555**
35°	**1.743**
30°	**2.000**

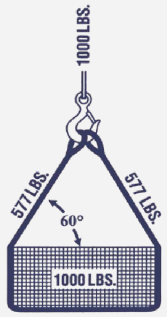
EXAMPLE

A. Vertical lift:

Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift

B. Horizontal sling angle is 60 degrees:

Multiply 500 lbs. by 1.154 load factor (from table) = 577 lbs. Actual load per leg.



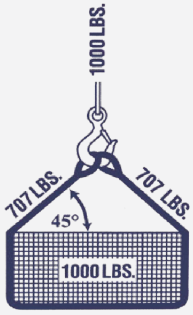
EXAMPLE

A. Vertical lift:

Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift

B. Horizontal sling angle is 45 degrees:

Multiply 500 lbs. by 1.414 load factor (from table) = 707 lbs. Actual load per leg.



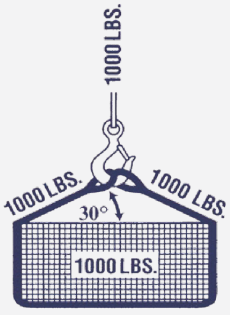
EXAMPLE

A. Vertical lift:

Total load is 1,000 lbs. divided by two legs = 500 lbs. load per leg if vertical lift

B. Horizontal sling angle is 30 degrees:

Multiply 500 lbs. by 2.000 load factor (from table) = 1000 lbs. Actual load per leg.



WARNING:

Slings shall not be used with horizontal angles less than 30°.

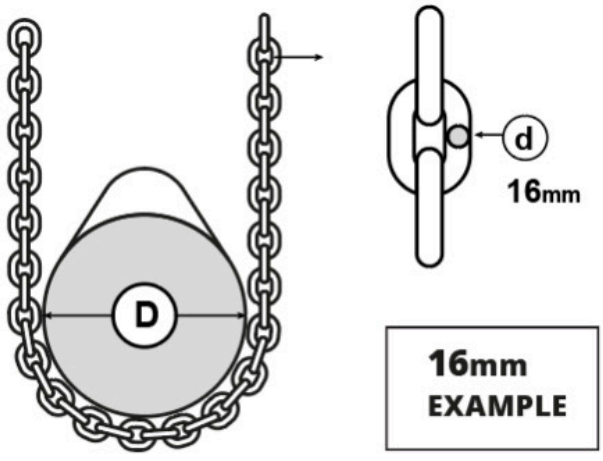
WIRE ROPE SLINGS
D/d RATIOS

When a sling is rigged as a basket, the diameter of the bend where the sling contacts the load can affect the sling's lifting capacity. How much the lifting capacity is affected can be calculated by dividing the diameter of the bend where the rope contacts the load (represented by "D") by the diameter of the rope or the component rope diameter in a multi-part sling (represented by "d").

For example, if the diameter of the bend ("D") is 10 and the component rope diameter ("d") is 1/2, the D/d ratio is 10÷1/2 or 20.

When using D/d ratios that are smaller than those shown in the table below, the rated capacity of the sling must be decreased.

Standard D/d ratios are applied to determine efficiency of various sling constructions



D/d ratio for 16mm	
D	**RATED CAPACITY**
Less than 8mm	50%
16mm - 32mm	70%
Greater than 32mm	No deration

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WIRE ROPE SLINGS
INSPECTIONS

Before using slings, inspect them to be sure they meet the requirements for that application.

HOW OFTEN TO INSPECT

Both AMSE Standard B30.9 and OSHA require that wire ropes receive two types of inspections:

1. **A DAILY VISUAL INSPECTION** The person handling the sling must do this each day and should check for major damage or deterioration that would weaken the sling and for obvious signs such as broken wires, kinks, crushing, broken attachments and severe corrosion.

2. **ADDITIONAL INSPECTIONS AT REGULAR INTERVALS** These are based on frequency of sling use, severity of service conditions, the nature of the lifts and prior experience based on service life of slings used in similar circumstances. A designated person who has a working knowledge of wire rope must conduct these inspections.

Inspection shall be made at least annually and shall include a record of the inspection or of apparent conditions to provide the basis for a continuing evaluation. Inspection shall be conducted on the entire length of the sling, including splices, end attachments and fittings.

HOW TO INSPECT

The following procedures are offered as a guide for conducting inspections:

1. Place the sling in a position that enables the inspector to access and see every part of the sling.
2. Clean off all dirt and grease with a wire brush or rags to reveal wires and fittings.
3. Examine the entire length of the sling thoroughly, especially the parts showing the most wear.
4. Pay special attention to fittings and end attachments and areas of the sling next to these fittings.
5. Find the most worn or damaged section of the sling and carefully check it against removal criteria.
6. Label or identify all slings you have inspected.
7. Keep records of all inspections, including dates and conditions of slings.
8. Immediately destroy all slings you have rejected.
9. Store slings you want to reuse in a safe place away from damaging weather, heat and dirt.

WHEN TO REPLACE YOUR WIRE ROPE SLING

According to ASME B30.9, you must remove a wire rope sling from service immediately if any of the following conditions are present:

1. **RATED CAPACITY TAG** Missing or illegible sling identification tag.
2. **BROKEN WIRES** For single part body slings and strand laid grommets: 5 broken wires in one strand in one rope lay or 10 broken wires in all strands in one rope lay. For cable-laid grommets and multi-part slings, use the following guidelines.

ALLOWABLE BROKEN WIRES

- *Cable-laid grommet 20 per lay*
- *Less than 8-part braid 20 per braid*
- *8-part braid or more 40 per braid*

3. **METAL LOSS** Wear or scraping of one-third the original diameter of the outside individual wires.

4. **DISTORTION** Such as kinking, crushing or bird-caging. Look closely for wires or strands that may have been pushed out of their original positions in the rope.

5. **HEAT DAMAGE** Any metallic discoloration or loss of internal lubricant caused by heat exposure.

6. **DAMAGED END ATTACHMENTS** Cracked, bent or broken fittings. Also, any evidence that eye splices have slipped, or tucked strands have moved.

7. **BENT HOOKS** deformation - any visible apparent bend or twist from the plane of the unbent hook. Throat opening any distortion causing an increase in throat opening of 5% not to exceed 1/4 in. (66mm) (or as recommended by manufacturer).

8. **METAL CORROSION** Severe corrosion of the rope or end attachments that has caused pitting or binding of wires. Light rusting doesn't normally affect a sling's strength.

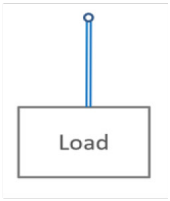
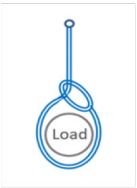
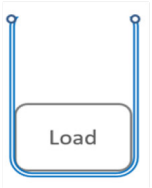
HOW TO DISPOSE OF A REJECTED WIRE ROPE SLING

Once the qualified person has determined a sling is no longer usable, he should tag it immediately, "Do Not Use." The sling should then be destroyed as soon as possible by cutting the eye and fittings from the rope. This will prevent accidental reuse of the sling.

MECHANICAL SPLICE IWRC

VERTICAL, CHOKER, OR VERTICAL BASKET RATINGS

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

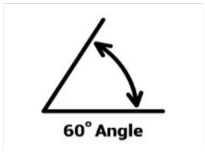
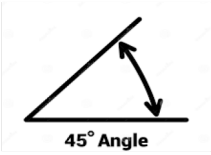
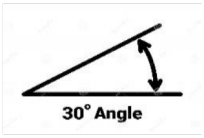
ROPE DIAMETER (INCHES)	VERTICAL 			CHOKER 			BASKET 		
	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS
1/4"	0.56	0.65	0.71	0.41	0.48	0.52	1.1	1.3	1.4
5/16"	0.87	1.0	1.1	0.64	0.74	0.81	1.7	2	2.2
3/8"	1.2	1.4	1.6	0.92	1.1	1.2	2.5	2.9	3.2
7/16"	1.7	1.9	2.1	1.2	1.4	1.6	3.4	3.9	4.3
1/2"	2.2	2.5	2.8	1.6	1.9	2	4.4	5.1	5.5
9/16"	2.8	3.2	3.5	2	2.4	2.6	5.5	6.4	7
5/8"	3.4	3.9	4.3	2.5	2.9	3.2	6.8	7.8	8.6
3/4"	4.9	5.6	6.2	3.6	4.1	4.5	9.7	11	12
7/8"	6.6	7.6	8.3	4.8	5.6	6.1	13	15	17
1"	8.5	9.8	11	6.3	7.2	8.0	17	20	22
1-1/8"	10	12		7.9	9.1		21	24	
1-1/4"	13	15		10	11		26	30	
1-3/8"	15	18		12	13		31	36	
1-1/2"	18	21		14	16		37	42	
1-5/8"	21	24		16	18		43	49	
1-3/4"	25	28		19	21		49	57	
1-7/8"	28	32		21	24		56	64	
2"	32	37		24	28		64	73	
2-1/8"	35	40		27	31		69	80	
2-1/4"	39	44		30	35		77	89	
2-3/8"	43	49		33	38		86	99	
2-1/2"	47	54		37	42		94	109	
2-5/8"	52	60		40	46		104	119	
2-3/4"	57	65		44	51		113	130	
2-7/8"	61	71		48	55		123	141	
3"	67	77		52	60		133	153	
3-1/8"	72	82		56	64		144	165	
3-1/4"	77	89		60	69		154	177	
3-3/8"	83	95		64	74		165	190	
3-1/2"	88	102		69	79		177	203	

NOTE	
	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25
	RATED CAPACITIES BASED ON PIN DIAMETER NO LARGER THAN NATURAL EYE WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
	RATED CAPACITIES BASED ON DESIGN FACTOR OF 5/1
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

MECHANICAL SPLICE IWRC

2-LEG BRIDLE

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

ROPE DIAMETER (INCHES)	60° 			45° 			30° 		
	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS
1/4"	0.97	1.1	1.2	0.79	0.91	1.0	0.56	0.65	0.71
5/16"	1.5	1.7	1.9	1.2	1.4	1.6	0.87	1.0	1.1
3/8"	2.2	2.5	2.7	1.8	2.0	2.2	1.2	1.4	1.6
7/16"	2.9	3.4	3.7	2.4	2.7	3	1.7	1.9	2.1
1/2"	3.8	4.4	4.8	3.1	3.6	3.9	2.2	2.5	2.8
9/16"	4.8	5.5	6.1	3.9	4.5	5	2.8	3.2	3.5
5/8"	5.9	6.8	7.5	4.8	5.5	6.1	3.4	3.9	4.3
3/4"	8.4	9.7	11	6.9	7.9	8.7	4.9	5.6	6.2
7/8"	11	13	14	9.3	11	12	6.6	7.6	8.3
1"	15	17	19	12	14		8.5	9.8	11
1-1/8"	18	21		15	17		10	12	
1-1/4"	22	26		18	21		13	15	
1-3/8"	27	31		22	25		15	18	
1-1/2"	32	37		26	30		18	21	
1-5/8"	37	42		30	35		21	24	
1-3/4"	43	49		35	40		25	28	
1-7/8"	49	56		40	46		28	32	
2"	55	63		45	52		32	37	
2-1/8"	60	69		49	56		35	40	
2-1/4"	67	77		55	63		39	44	
2-3/8"	75	85		61	70		43	49	
2-1/2"	82	94		67	77		47	54	
2-5/8"	90	103		73	84		52	60	
2-3/4"	98	113		80	92		57	65	
2-7/8"	106	122		87	100		61	71	
3"	115	133		94	108		67	77	
3-1/8"	124	143		102	117		72	82	
3-1/4"	134	153		109	125		77	89	
3-3/8"	143	165		117	135		83	95	
3-1/2"	153	173		125	144		88	102	

NOTE	
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	RATED CAPACITIES BASED ON PIN DIAMETER NO LARGER THAN NATURAL EYE WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
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MECHANICAL SPLICE IWRC

3-LEG BRIDLE

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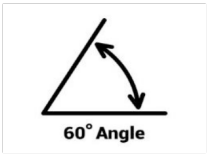
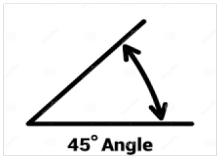
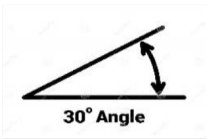
ROPE DIAMETER (INCHES)	60° 			45° 			30° 		
	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS
1/4"	1.5	1.7	1.8	1.2	1.4	1.5	0.84	0.97	1.1
5/16"	2.3	2.6	2.9	1.8	2.1	2.3	1.3	1.5	1.7
3/8"	3.2	3.7	4.1	2.6	3.0	3.3	1.9	2.2	2.4
7/16"	4.4	5.0	5.5	3.6	4.1	4.5	2.5	2.9	3.2
1/2"	5.7	6.6	7.2	4.6	5.4	5.9	3.3	3.8	4.2
9/16"	7.2	8.3	9.1	5.8	6.8	7.5	4.1	4.8	5.3
5/8"	8.8	10	11	7.2	8.3	9.1	5.1	5.9	6.5
3/4"	13	15	16	10	12	13	7.3	8.4	9.2
7/8"	17	20	22	14	16	18	9.9	11	12
1"	22	26	28	18	21	23	13	15	16
1-1/8"	27	31		22	26		16	18	
1-1/4"	33	38		27	31		19	22	
1-3/8"	40	46		33	38		23	27	
1-1/2"	48	55		39	45		27	32	
1-5/8"	55	63		45	52		32	37	
1-3/4"	64	74		52	60		37	42	
1-7/8"	73	84		60	68		42	48	
2"	83	95		68	78		48	55	
2-1/8"	90	103		73	84		52	60	
2-1/4"	101	116		82	94		58	67	
2-3/8"	112	128		91	105		65	74	
2-1/2"	123	141		100	115		71	82	
2-5/8"	135	155		110	126		78	89	
2-3/4"	147	169		120	138		85	97	
2-7/8"	159	183		130	150		92	106	
3"	173	199		141	162		100	115	
3-1/8"	187	214		152	175		108	124	
3-1/4"	201	230		164	188		116	133	
3-3/8"	215	247		175	202		124	143	
3-1/2"	230	264		187	215		133	152	

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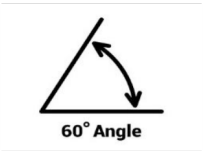
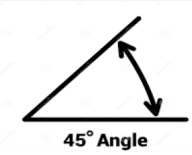
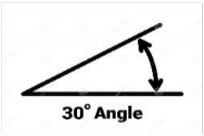
MECHANICAL SPLICE IWRC

4-LEG BRIDLE

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

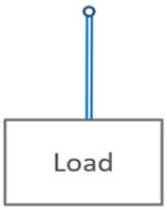
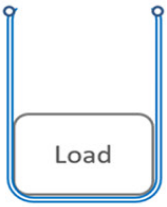
ROPE DIAMETER (INCHES)	60° 			45° 			30° 		
	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS	IPS	EIPS	EEIPS
1/4"	1.9	2.2	2.4	1.6	1.8	2.0	1.1	1.3	1.4
5/16"	3.0	3.5	3.8	2.5	2.8	3.1	1.7	2.0	2.2
3/8"	4.3	5.0	5.5	3.5	4.1	4.5	2.5	2.9	3.2
7/16"	5.9	6.7	7.4	4.8	5.5	6.0	3.4	3.9	4.3
1/2"	7.6	8.8	9.6	6.2	7.1	7.8	4.4	5.1	5.5
9/16"	9.5	11	12	7.8	9.0	9.9	5.5	6.4	7
5/8"	12	14	15	9.6	11	12	6.8	7.8	8.6
3/4"	17	19	21	14	16	17	9.7	11	12
7/8"	23	26	29	19	21	24	13	15	17
1"	30	34	37	24	28	31	17	20	22
1-1/8"	36	42		30	34		21	24	
1-1/4"	44	51		36	42		26	30	
1-3/8"	54	62		44	50		31	36	
1-1/2"	63	73		52	60		37	42	
1-5/8"	74	85		60	69		43	49	
1-3/4"	85	98		70	80		49	57	
1-7/8"	97	112		80	91		56	64	
2"	110	127		90	104		64	73	
2-1/8"	120	138		98	113		69	80	
2-1/4"	134	154		109	126		77	89	
2-3/8"	149	171		122	139		86	99	
2-1/2"	163	188		133	154		94	109	
2-5/8"	180	206		147	169		104	119	
2-3/4"	196	225		160	184		113	130	
2-7/8"	213	244		174	200		123	141	
3"	231	265		188	216		133	153	
3-1/8"	249	286		203	233		144	165	
3-1/4"	267	307		218	250		154	177	
3-3/8"	286	330		234	269		165	190	
3-1/2"	306	352		250	287		177	203	

NOTE	
	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25
	RATED CAPACITIES BASED ON PIN DIAMETER NO LARGER THAN NATURAL EYE WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
	RATED CAPACITIES BASED ON DESIGN FACTOR OF 5/1
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

THREE-PART BRAIDED SLING IWRC

VERTICAL, CHOKER, OR VERTICAL BASKET RATINGS

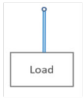
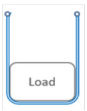
****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

ROPE DIAMETER (INCHES)	SLING DIAMETER (INCHES)				EYE DIMENSIONS (")	
		VERTICAL	CHOKER	BASKET	LENGTH	WIDTH
1/4"	1/2"	1.7	1.3	3.4	4	2
5/16"	5/8"	2.6	1.9	5.2	6	3
3/8"	3/4"	3.6	2.7	7.2	8	4
7/16"	7/8"	4.9	3.7	9.8	10	5
1/2"	1"	6.4	4.8	12	12	6
9/16"	1-1/8"	8	6	16	14	7
5/8"	1-1/4"	9.9	7.4	19	16	8
3/4"	1-1/2"	14	10	28	20	10
7/8"	1-3/4"	19	14	38	24	12
1"	2"	24	18	49	28	14
1-1/8"	2-1/4"	31	23	62	32	16
1-1/4"	2-1/2"	38	28	76	36	18
1-3/8"	2-3/4"	46	34	92	40	20
1-1/2"	3"	55	41	110	44	22
1-3/4"	3-1/2"	73	54	146	52	26
2"	4"	95	71	190	56	28
2-1/4"	4-1/2"	118	88	263	64	32
2-1/2"	5"	145	109	290	72	36
2-3/4"	5-1/2"	173	130	346	80	40
3"	6"	204	153	408	88	44
3-1/2"	7"	270	202	540	96	48
NOTE	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 5 TIMES THE SLING DIAMETER					
	PIN SIZE EQUALS D/d RATIO OF 3 TIMES USING COMPONET PARTS					
	RATED CAPACITIES BASED ON D/d RATIO OF 1.5 TIMES THE SLING DIAMTERE INSIDE THE EYE					
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED					

SIX-PART BRAIDED SLING IWRC

VERTICAL, CHOKER, OR VERTICAL BASKET RATINGS

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

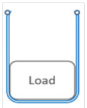
ROPE DIAMETER (INCHES)	SLING DIAMETER (INCHES)				SLIP - THROUGH THIMBLES	CASING THIMBLES	SLIDING CHOKER HOOKS	EYE DIMENSIONS (")	
		VERTICAL	CHOKER	BASKET	(ST)	(CT)	(BCH)	LENGTH	WIDTH
3/16"	7/8"	1.6	1.4	3.2	ST-16	CT-8	BCH-2	8	4
1/4"	1-1/8"	2.9	2.5	5.7	ST-20	CT-8	BCH-4	10	5
5/16"	1-3/8"	4.4	3.9	8.9	ST-20	CT-10	BCH-5	12	6
3/8"	1-11/16"	6.3	5.5	13	ST-24	CT-12	BCH-6	14	7
7/16"	2"	8.6	7.5	17	ST-36	CT-14	BCH-7	16	8
1/2"	2-1/4"	11	9.8	22	ST-44	CT-16	BCH-8	18	9
9/16"	2-1/2"	14	12	28	ST-52			20	10
5/8"	2-13/16"	17	15	35	ST-52			22	11
3/4"	3-3/8"	26	22	49	ST-60			24	12
7/8"	4"	33	29	67	ST-68			28	14
1"	4-1/2"	43	38	87	ST-68			32	16
1-1/8"	5-1/16"	55	48	109	ST-80			36	18

NOTE	
	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25 TIMES THE COMPONET ROPE DIAMETER
	PIN DIAMETER NO LARGER THAN NATURAL NATURAL WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
	RATED CAPACITIES BASED ON 5:1 DESIGN FACTOR
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

EIGHT-PART BRAIDED SLING IWRC

VERTICAL, CHOKER, OR VERTICAL BASKET RATINGS

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

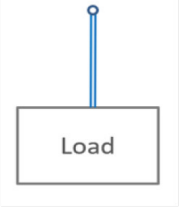
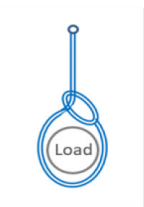
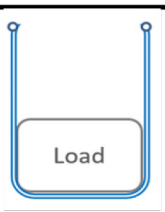
ROPE DIAMETER (INCHES)	SLING DIAMETER (INCHES)				SLIP - THROUGH THIMBLES	CASING THIMBLES	SLIDING CHOKER HOOKS	EYE DIMENSIONS (")	
		VERTICAL	CHOKER	BASKET	(ST)	(CT)	(BCH)	LENGTH	WIDTH
1/8"	9/16"	0.95	0.71	1.9	ST-10	CT-4	BCH-2	6	3
3/16"	7/8"	2.1	1.5	4.1	ST-16	CT-8	BCH-3	8	4
1/4"	1-1/8"	3.1	2.3	6.1	ST-20	CT-10	BCH-4	10	5
5/16"	1-3/8"	4.8	3.6	9.5	ST-24	CT-12	BCH-5	12	6
3/8"	1-11/16"	6.8	5.1	14	ST-36	CT-14	BCH-6	14	7
7/16"	2"	9.3	6.9	18	ST-44	CT-16	BCH-7	16	8
1/2"	2-1/4"	12	9	24	ST-44		BCH-8	18	9
9/16"	2-1/2"	15	11	30	ST-52			20	10
5/8"	2-13/16"	19	14	37	ST-60			22	11
3/4"	3-3/8"	37	20	53	ST-68			24	12
7/8"	4"	36	27	72	ST-80			28	14
1"	4-1/2"	47	35	94	ST-80			32	16

NOTE	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25 TIMES THE COMPONET ROPE DIAMETER
	PIN DIAMETER NO LARGER THAN NATURAL NATURAL WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
	RATED CAPACITIES BASED ON 5:1 DESIGN FACTOR
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

NINE-PART BRAIDED SLING IWRC

VERTICAL, CHOKER, OR VERTICAL BASKET RATINGS

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

ROPE DIAMETER (INCHES)	SLING DIAMETER (INCHES)				EYE DIMENSIONS (")	
		VERTICAL	CHOKER	BASKET	LENGTH	WIDTH
1/4"	1"	4.3	3.2	8.6	12	6
5/16"	1-1/4"	6.6	5	13	12	6
3/8"	1-1/2"	9.5	7.1	19	13	7-1/2
7/16"	1-3/4"	14	11	29	18	9
1/2"	2"	19	14	38	20	10
9/16"	2-3/16"	24	18	48	24	12
5/8"	2-1/2"	29	22	59	24	12
3/4"	3"	42	32	84	30	15
7/8"	3-1/2"	57	43	114	34	17
1"	4"	74	56	148	40	20
1-1/8"	4-1/2"	93	60	187	44	22
1-1/4"	5"	115	86	230	50	25
1-3/8"	5-1/2"	138	104	276	54	27
1-1/2"	6"	164	123	328	60	30
1-3/4"	7"	220	165	440	70	35
2"	8"	285	214	570	80	40
2-1/4"	9"	355	267	711	90	45
2-1/2"	10"	434	326	869	100	50
2-3/4"	11"	485	358	970	110	55
3"	12"	574	424	1148	120	60
3-1/2"	14"	761	563	1421	140	70

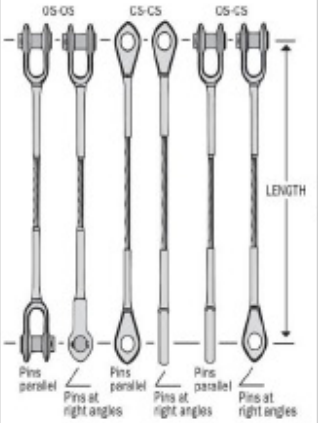
NOTE	
	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 5 TIMES THE SLING DIAMETER
	PIN DIAMETER NO LARGER THAN NATURAL NATURAL WIDTH OR LESS THAN THE NOMINAL DIAMETER
	RATED CAPACITIES BASED ON 5:1 DESIGN FACTOR
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

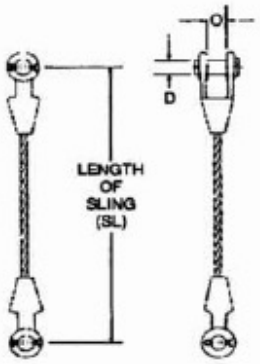
SWAGE AND SPELTER SOCKETS IWRC

VERTICAL OR VERTICAL BASKET

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****

ROPE DIAMETER (INCHES)	VERTICAL				VERTICAL BASKET		
	IPS	EIPS	EEIPS		IPS	EIPS	EEIPS
1/4"	0.59	0.68	0.74		1.1	1.3	1.4
5/16"	0.9	1.1	1.2		1.7	1.9	2.1
3/8"	1.3	1.5	1.7		2.4	2.8	3.1
7/16"	1.8	2.0	2.2		3.3	3.8	4.1
1/2"	2.3	2.7	2.9		4.3	4.9	5.4
9/16"	2.9	3.4	3.7		5.4	6.2	6.8
5/8"	3.6	4.1	4.5		6.6	7.6	8.4
3/4"	5.1	5.9	6.5		9.5	11	12
7/8"	6.9	8.0	8.8		13	15	16
1"	9.0	10	11		17	19	21
1-1/8"	11	13	14		21	24	26
1-1/4"	14	16	189		26	30	33
1-3/8"	17	19	21		31	36	39
1-1/2"	20	23	25		37	42	46
1-5/8"	23	26	29		43	49	54
1-3/4"	37	31	34		49	57	63
1-7/8"	30	35	38		56	64	71
2"	34	40	43		64	73	80
2-1/8"	38	44	49		71	82	90
2-1/4"	43	49	54		80	91	101
2-3/8"	48	55	60		88	101	112
2-1/2"	52	60	66		97	112	123
2-5/8"	58	66	73		107	122	135
2-3/4"	63	72	79		116	134	147
2-7/8"	68	78	86		126	145	160
3"	74	85	94		137	157	173
3-1/8"	80	92	101		148	169	187
3-1/4"	86	98	109		159	182	201
3-3/8"	92	106	116		170	196	215
3-1/2"	98	113	124		182	209	230



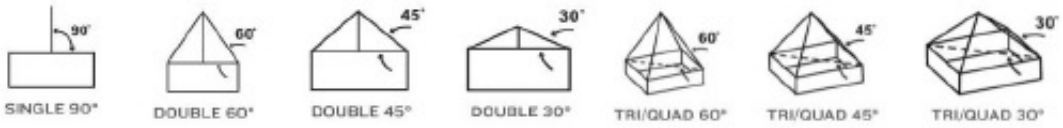


NOTE	
	RATED CAPACITIES BASKET HITCH BASED ON D/d RATIO OF 25
	RATED CAPACITIES BASED ON PIN DIAMETER NO LARGER THAN NATURAL EYE WIDTH OR LESS THAN THE NOMINAL SLING DIAMETER
	RATED CAPACITIES BASED ON DESIGN FACTOR OF 5/1
	HORIZONTAL SLING ANGLES LESS THAN 30 DEGREES SHALL NOT BE USED

CHAIN SLING WORKING LOAD LIMITS

SINGLE LEG, DOUBLE LEG, TRIPLE/QUAD LEG

****CAPACITY SHOWN IN TONS OF 2,000 LBS. RATINGS ARE FOR 6X19 AND 6X36 CLASS****



CHAIN SIZE (INCHES)	SINGLE -90° (Lbs)	DOUBLE - 60° (Lbs)	DOUBLE - 45° (Lbs)	DOUBLE - 30° (Lbs)	TRIPLE/QUAD 60° (Lbs)	TRIPLE/QUAD 45° (Lbs)	TRIPLE/QUAD 30° (Lbs)
GRADE 80							
7/32"	2,100	3,600	3,000	2,100	5,500	4,400	3,200
9/32"	3,500	6,100	4,900	3,500	9,100	7,400	5,200
5/16"	4,500	7,800	6,400	4,500	11,700	9,500	6,800
3/8"	7,100	12,300	10,000	7,100	18,400	15,100	10,600
1/2"	12,000	20,800	17,000	12,000	31,200	25,500	18,000
5/8"	18,100	31,300	25,600	18,100	47,000	38,400	27,100
3/4"	28,300	49,000	40,000	29,300	73,500	60,000	42,400
7/8"	34,200	59,200	48,400	34,200	88,900	72,500	51,300
1"	47,700	82,600	67,400	47,700	123,900	101,200	71,500
1-1/4"	72,300	125,200	102,200	72,300	187,800	153,400	108,500

GRADE 100							
7/32"	2,700	4,700	3,800	2,700	7,000	5,700	4,000
9/32"	4,300	7,400	6,100	4,300	11,200	9,100	6,400
5/16"	5,700	9,900	8,100	5,700	14,800	12,100	8,500
3/8"	8,800	15,200	12,400	8,800	22,900	18,700	13,200
1/2"	15,000	26,000	21,200	15,000	39,000	31,800	22,500
5/8"	22,600	39,100	32,000	22,600	58,700	47,900	33,900
3/4"	35,300	61,100	49,900	35,300	91,700	74,900	53,000
7/8"	42,700	74,000	60,400	42,700	110,900	90,600	64,000
1"	59,700	103,400	84,400	59,700	155,100	126,600	89,550
1-1/4"	90,400	156,600	127,800	90,400	234,900	191,800	135,600

WARNING Do not exceed Working Load Limits (WLL)! Failure to read, understand and follow the CAUTIONS listed here may cause serious physical injury and property damage.

- Do Not load an assembly in excess of working load limits shown.
- Do Not put an unequal load on one leg of a sling. Distribute the load evenly.
- Do Not expose assembly to impact, rapid lifts or sudden stops.
- Do Not tie knots or allow chains to become twisted.
- Do Not use a chain that appears to be defective, worn or damaged.
- Do Not fasten chain over sharp corners or edges. Protect with padding.
- Do Not tip load hooks. The latch must never support the load.

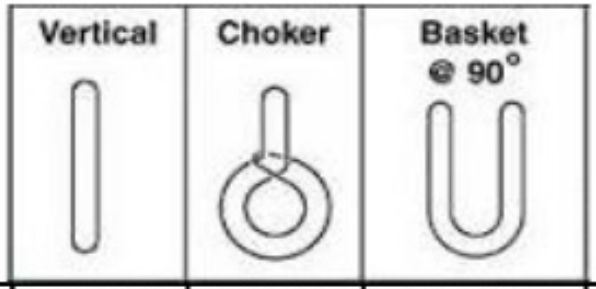
When using non-cradle or non-shortening grab hooks in a shortening or choker application, the Working Load Limit (WLL) of the sling must be reduced by 20%.

ENDLESS POLYESTER ROUNDSLING

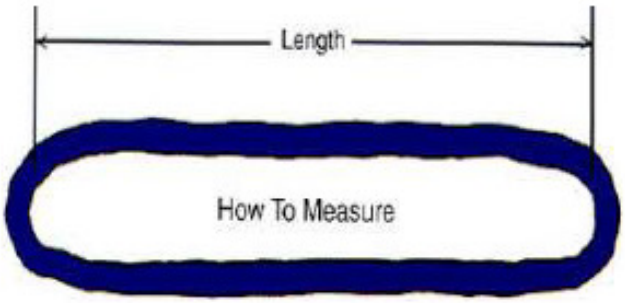
GLOBAL RIGGING AN SYNTHETIC'S ROUNDSLINGS ARE MADE IN AMERICA

Features and Benefits

- Wear points can be shifted to extend life of sling
- Our most flexiable sling
- All slings have a 5:1 design factor



SLING PART #	VERTICAL WLL (LBS)	CHOKER WLL (LBS)	BASKET @ 90 DEGREES	Minimum Hardware Dia. ** (in)	Minimum length	Aprox. Weight/Foot	Aprox. Body Dia. Relaxed
GRS1 PURPLE	2,600	2,100	5,200	7/16	3	0.2	5/8
GRS2 GREEN	5,300	4,200	10,600	5/8	3	0.3	7/8
GRS3 YELLOW	8,400	6,700	16,800	3/4	3	0.5	1 1/8
GRS4 TAN	10,600	8,500	21,200	7/8	3	0.6	1 1/8
GRS5 RED	13,200	10,600	26,400	1	3	0.8	1 3/8
GRS6 WHITE	16,800	13,400	33,600	1 1/8	3	0.9	1 3/8
GRS7 BLUE	21,200	17,000	42,400	1 3/16	3	1.3	1 3/4
GRS8 ORANGE	25,000	20,000	50,000	1 1/2	4	1.5	2
GRS9 ORANGE	31,000	24,800	62,000	1 1/2	4	1.7	2 1/4
GRS10 ORANGE	40,000	32,000	80,000	1 1/2	6	2.2	2 1/2
GRS11 BROWN	53,000	42,400	106,000	2	6	2.8	2 3/4
GRS12 OLIVE	66,000	52,800	132,000	2 1/8	6	3.4	3 1/8
GRS13 BLACK	90,000	72,000	180,000	2 1/2	6	4.3	3 5/8
GRS14 BLACK	100,000	80,000	200,000	2 1/2	6	5.0	4 1/4



WARNING

Do not exceed rated capacities.

Sling capacity decreases as the angle from horizontal decreases.

Slings should never be used at angles less than 30 degrees.

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

ENDLESS POLYESTER WEB-SLING

	Part Number	Web Width (in.)	Rated Capacity (lbs)		
			Vertical	Choker	V. Basket
One Ply	PEN1-901	1	3,200	2,500	6,400
	PEN1-902	2	6,400	5,000	12,800
	PEN1-903	3	8,800	7,040	17,600
	PEN1-904	4	11,500	9,200	23,000
	PEN1-906	6	16,500	13,200	33,000
	PEN1-908	8	19,200	15,400	38,400
	PEN1-910	10	22,400	17,900	44,800
	PEN1-912	12	26,900	21,500	53,800
Two Ply	PEN2-901	1	6,200	4,900	12,400
	PEN2-902	2	12,400	9,900	24,800
	PEN2-903	3	16,300	13,000	32,600
	PEN2-904	4	20,700	16,500	41,400
	PEN2-906	6	28,600	23,000	57,200
	PEN2-908	8	30,700	24,500	61,400
	PEN2-910	10	33,600	26,800	67,200
	PEN2-912	12	37,600	30,000	75,200
Three Ply	PEN3-901	1	8,000	6,400	16,000
	PEN3-902	2	16,000	12,800	32,000
	PEN3-903	3	21,500	17,200	43,000
	PEN3-904	4	28,700	23,000	57,400
	PEN3-906	6	40,700	32,500	81,400
	PEN3-908	8	46,000	36,800	92,000
	PEN3-910	10	51,500	41,200	103,000
	PEN3-912	12	59,200	47,300	118,400
Four Ply	PEN4-901	1	10,000	8,000	20,000
	PEN4-902	2	19,800	15,800	39,600
	PEN4-903	3	26,700	21,300	53,400
	PEN4-904	4	35,600	28,400	71,200
	PEN4-906	6	50,500	40,400	101,000
	PEN4-908	8	57,600	46,000	115,200
	PEN4-910	10	67,200	53,700	134,400
	PEN4-912	12	80,700	64,500	161,400

WARNING	Do not exceed rated capacities.
	Sling capacity decreases as the angle from horizontal decreases.
	Slings should never be used at angles less than 30 degrees.

POLYESTER WEB-SLING

X can equal either flat or twisted eyes, if customer wants twisted it must be specified. Provide required length when ordering.

	Part Number	Web Width (in.)	Rated Capacity (lbs)		
			Vertical	Choker	V. Basket
One Ply	PEEX1-901	1	1,600	1,250	3,200
	PEEX1-902	2	3,200	2,500	6,400
	PEEX1-903	3	4,800	3,800	9,600
	PEEX1-904	4	6,400	5,000	12,800
	PEEX1-906	6	9,600	7,700	19,200
	PEEX1-908	8	12,800	10,200	25,600
	PEEX1-910	10	16,000	12,800	32,000
	PEEX1-912	12	19,200	15,400	38,400
Two Ply	PEEX2-901	1	3,200	2,500	6,400
	PEEX2-902	2	6,400	5,000	12,800
	PEEX2-903	3	8,600	6,900	17,200
	PEEX2-904	4	11,500	9,200	23,000
	PEEX2-906	6	16,300	13,000	32,600
	PEEX2-908	8	19,200	15,400	38,400
	PEEX2-910	10	22,400	17,900	44,800
	PEEX2-912	12	26,900	21,500	53,800
Three Ply	PEEX3-901	1	4,100	3,300	8,200
	PEEX3-902	2	8,300	6,600	16,600
	PEEX3-903	3	12,500	10,000	25,000
	PEEX3-904	4	16,000	12,800	32,000
	PEEX3-906	6	23,000	18,400	46,000
	PEEX3-908	8	30,700	24,500	61,400
	PEEX3-910	10	36,800	29,400	73,600
	PEEX3-912	12	44,000	35,200	88,000
Four Ply	PEEX4-901	1	5,000	4,000	10,000
	PEEX4-902	2	10,000	8,000	20,000
	PEEX4-903	3	14,900	11,900	29,800
	PEEX4-904	4	19,800	15,800	39,600
	PEEX4-906	6	29,800	23,800	59,600
	PEEX4-908	8	39,700	31,700	79,400
	PEEX4-910	10	49,600	39,600	99,200
	PEEX4-912	12	59,500	47,600	119,000

WARNING

Do not exceed rated capacities.

Sling capacity decreases as the angle from horizontal decreases.

Slings should never be used at angles less than 30 degrees.

Eye length (Applies to all Web slings)

Plies of Web	SLING WIDTH (In.)							
	1	2	3	4	6	8	10	12
1	8 1/2	10	11	12	16	20	24	24
2	8 1/2	10	11	12	16	20	24	24
3	10	12	14	16	18	24	24	24
4	10	12	14	16	18	24	24	24

GLOBAL
RIGGING AND SYNTHETICS
WIRE ROPE • CHAIN • SLINGS • TESTING

LOAD SECUREMENT & RENTALS

LOAD SECUREMENT

Global Rigging & Synthetics offers a comprehensive selection of ratchet straps and transport chain tailored to your securing requirements. Our ratchet straps range from 1-inch to 4-inches in width, available in custom lengths to precisely meet your needs.

Designed for maximum durability and ease of use, these straps are ideal for a variety of applications, ensuring your loads are securely managed.

We also stock domestic grade 70 transport chain up to 5/8" which is suitable for flatbed trucking, towing, and safety uses. Our Grade 70 chain is a top choice for professionals seeking dependable load securement solutions.

PORTABLE LOAD CELLS

Our portable load cells are essential tools for accurate measurement and monitoring of tensile forces. Available in capacities ranging from 1 tonne to 55te, these devices are designed for versatility and ease of use in a variety of industrial applications:

- Wide Range of Capacities: From 1te to 55te, choose the perfect load cell to match your project needs.
- High Accuracy: Ensure precise measurements for safety and efficiency in your lifting operations.
- Portable and Easy to Use: Designed for convenience, our load cells can be easily integrated into your existing setups.

WARNING LABELS

⚠WARNING

Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Observe rated load. Avoid sharp edges and exposure to acid, alkali, sunlight and temperatures over 180° F. DEATH OR INJURY can occur from improper use or care.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

SYNTHETIC WEB SLINGS

INSTRUCTIONS FOR CARE, USE, INSPECTION, AND REPAIR.

CARE ♦ Store in a cool, clean, dark area away from sun and any ultraviolet light source.

USE ♦ Check weight of load. ♦ Check sling rated load for type of lift, angle of loading (see load angle chart). ♦ Sling shall not be twisted, tied into knots or joined by knotting. ♦ Sling shall always be protected from being cut by sharp corners, sharp edges, protrusions or abrasive surfaces. ♦ Center load on base (bowl) of hook unless hook is designed for point loading. ♦ Balance load. ♦ Maintain load control. ♦ Avoid jerking the load. ♦ Be alert for snagging of load. ♦ Avoid dragging sling over rough surfaces and from under the load. ♦ Choker hitch must choke on webbing, never on end fitting. ♦ Stand clear of load at all times. ♦ No person allowed beneath the load. ♦ Persons are not to ride on sling or load. ♦ If sling is to be used in a chemical environment, contact manufacturer for specific recommendations. ♦ Web slings must be used with compatible fittings, hooks and shackles. ♦ Bunching of webbing reduces capacity.

INSPECTION ♦ ***Before use,*** check tag for rated load adequate for the lift. Look at webbing for knots, worn eyes, cuts, fraying, melted or charred fabric or chemical damage. Look at hardware for distorted, cracked, worn fittings. **If this wear or damage is present, if red core yarns are visible, if rated load tag is**

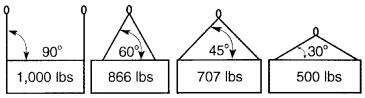
OVER

missing or is illegible, do not use the sling. Repair or replace it. ***Frequent inspection*** is done by the person handling the sling before each use and must include all of the ***Before use*** items. ***Periodic inspections*** should be recorded at least annually for normal service, more often if use is frequent or severe. ***Periodic inspections*** are performed by a designated person who records the observed condition and determines when further use would be hazardous.

REPAIR ♦ Field repair is not permitted. Only manufacturers or other qualified persons may make repairs.

LOAD ANGLE CHART

Angle factor *must* be applied to calculate the reduced sling capacity when lifting force is not at 90° to the plane of the load!

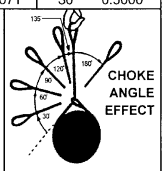


Multiply angle factor x sling's vertical rated load to calculate the reduced capacity at that angle.

Angle	Factor	Angle	Factor	Angle	Factor	Angle	Factor
90°	1.0000	70°	0.9397	55°	0.8192	40°	0.6428
80°	0.9848	65°	0.9063	50°	0.7660	35°	0.5736
75°	0.9659	60°	0.8660	45°	0.7071	30°	0.5000

Because of the greatly reduced lifting capacity, use extra care when the **horizontal** lift angle is less than 45° and do not make lifts of less than 30° load angle. *Example:* A sling rated at and lifting 1,000 pounds will be damaged – and could break suddenly – when the lifting angle is less than 30° at which angle the sling's capacity is reduced to only 500 pounds. *Important:* Use a longer sling to increase the angle which will also increase the allowable capacity.

For choker hitches, the lifting capacity is reduced by 25% or more, depending on the angle of choke.



ANGLES OF CHOKE	SLING RATED LOAD PERCENTAGE OF SINGLE LEG SLING CAPACITY
120 - 180	75%
90 - 119	65%
60 - 89	55%
30 - 59	40%

⚠WARNING

Can fail if damaged, misused or overloaded. Use only if trained. Observe rated load. Avoid sharp edges and exposure to acid, alkali, sunlight and temperature over 180°F. Do not use for overhead lifting. Remove from service if metal fittings are cracked, worn or deformed. DEATH OR INJURY can occur from improper use or care.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

SYNTHETIC WEB TIEDOWN

INSTRUCTIONS FOR CARE, USE, INSPECTION, AND REPAIR.

CARE ♦ Store in a clean, cool, dark dry place away from sunlight when not in use. ♦ Ultraviolet light (sunlight) will reduce the strength of webbing.

USE ♦ Check cargo weight. ♦ Determine how many tiedowns are needed: Total rated load (working load limit) of all the tiedowns used to secure the load must not be less than ½ the cargo weight. ♦ Reduce the rated load if angle (tiedown to load) is less than 90°. ♦ Attach tiedowns so as to restrict cargo movement. ♦ Pad sharp edges that contact the webbing. ♦ Avoid dragging tiedown over rough surfaces and from under the load. ♦ Defective or weak anchor points reduce the rated load. ♦ Never use tiedown to lift or suspend cargo. ♦ For use in abnormal conditions of heat, cold, chemical activity, consult the manufacturer. ♦ Always follow Federal, State or provincial regulations and the Commercial Vehicle Safety Alliance (CVSA) guidance for securing cargo.

INSPECTION ♦ ***Before use,*** check tag for the tiedown rated load. If tag is missing or illegible, do not use the tiedown. Look at webbing for cuts, knots, fraying, melted or charred fabric or chemical damage. Observe whether more than one-fourth of the stitching in a load bearing splice is worn through or cut. Look at hardware for distorted, cracked, worn fittings. **If this wear or damage is present, if rated load cannot be determined, do**

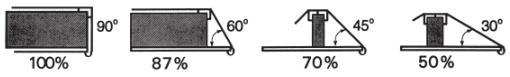
OVER

not use the tiedown. ***Frequent inspection*** is done by the person handling the tiedown each day it is used and must include all of the ***Before use*** items. ***Periodic inspections*** should be conducted at least monthly for normal service, more often if use is frequent or severe. ***Periodic inspections*** are performed by a designated person.

REPAIR ♦ Field repair is not permitted. Only manufacturers or other qualified persons may make repairs.

LOAD ANGLE EFFECT

Angle factor *must* be applied to calculate the reduced tiedown capacity when holding force is not at 90° to the plane of the load!



Percent x tiedown rated load = the reduced capacity at that angle.

Angle	%	Angle	%	Angle	%	Angle	%
90°	100	70°	94	50°	77	30°	50
85°	99	65°	91	45°	70	25°	42
80°	98	60°	87	40°	64	20°	34
75°	97	55°	82	35°	57	15°	26

WARNING

Failure to comply with this warning may result in sling failure and severe personal injury or death.

Inspection, Care and Use of Synthetic Polyester Roundslings

Removal From Service

A roundsling shall be removed from service if any of the following are visible.

1. Holes,tears,cuts,snags,embedded particles or abrasive wear that expose the core fibers.
2. If roundsling rated capacity tag is missing or not readable.
3. If roundsling has been tied into one or more knots.
4. Melting,charring or weld spatter of any part of the roundsling.
5. Acid or alkali burns of the roundsling.
6. Broken or worn stitching in the cover that exposes the core fibers.
7. Distortion,excessive pitting,corrosion or other damage to fitting(s).
8. Any conditions which cause doubt as to the strength of the roundsling.

Operation Practices

1. ROUNDSLINGS SHALL ALWAYS BE PROTECTED FROM BEING CUT OR DAMAGED BY CORNERS,EDGES OR PROTRUSIONS.
2. Roundslings should be protected from abrasive surfaces.
3. Determine the weight of the load. Roundslings shall not be loaded in excess of the rated capacity. Consideration shall be given to the roundsling angle,which affects rated capacity. (See Sling Angle Chart).
4. Select roundslings having suitable characteristics for type of load,hitch and environment.
5. Roundslings with fittings which are used in a choker hitch shall be of sufficient length to assure that the choking action is on the roundsling and never on a fitting.
6. Roundslings used in a basket hitch shall have the load balanced to prevent slippage.
7. The opening in fittings shall be the proper shape and size to insure that the fitting will seat properly in the hook or other attachments.
8. Roundslings should not be dragged on the floor or over an abrasive surface.
9. Roundslings shall not be twisted, shortened, lengthened or tied into knots, or joined by knotting.
10. Roundslings should not be pulled from under loads if the load is resting on the roundsling.
11. Roundslings equipped with metal fittings should not be dropped.
12. Roundslings that appear to be damaged shall not be used unless inspected and accepted by a designated person.
13. Roundslings shall be hitched in a manner providing control of the load.
14. Personnel,including portions of the human body,shall be kept from between the roundsling and the load,and from between the roundsling and the crane hook or hoist hook.
15. Personnel shall not stand under and should stand clear of the suspended load.
16. Personnel shall not ride the roundsling.
17. Shock loading shall be avoied.
18. Twisting and kinking the legs shall be avoided.
19. Load applied to the hook shall be centered in the base (bowl) of hook to prevent point loading on the hook.
20. During lifting, with or without the load, personnel shall be alert for possible snagging of the roundsling.
21. The roundsling's legs shall contain or support the load from the sides above the center of gravity when using a basket hitch.
22. Roundslings shall be long enough so that the rated capacity of the roundsling is adequate when the angle of the legs is taken into consideration. (See Sling Angle Chart)
23. If applicable, place blocks under load prior to setting down the load to allow removal of the roundsling.
24. Roundslings shall not be used at temperatures above 194 degrees F (90 degrees C).
25. Roundslings shall not be constricted or bunched between the eats of a clevis, shackle, or in a hook.
26. When a roundsling is used with a shackle, it is recommended that it be used (rigged) in the bow of the shackle.
27. Store roundslings in a cool, dry and dark place when not in use.

Inspection

A. Initial Inspection

Before any new or repaired roundsling is placed in service, it shall be inspected by a designated person to ensure that the correct roundsling is being used, as well as to determine that the roundsling meets applicable specifications and has not been damaged in shipment.

B. Frequent Inspection

This inspection shall be made by the user handling the roundsling each time it is used.

C. Periodic Inspection

This inspection shall be conducted by designated personnel. Frequency of inspection should be based on:

1. Frequency of roundsling use
2. Severity of service conditions
3. Experience gained on the service life of roundslings used in similar applications
4. Periodic inspections should be conducted at least annually

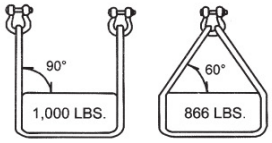
Recommended Minimum Connecting Hardware Diameter

Sling Size Vertical Capacity Lbs	Vertical Hitch In.	Vertical Hitch mm	Basket Hitch In.	Basket Hitch mm	Sling Size Vertical Capacity Lbs	Vertical Hitch In.	Vertical Hitch mm	Basket Hitch In.	Basket Hitch mm
2,600	.50	13	.62	16	25,000	1.25	32	1.88	48
5,300	.62	16	.88	23	31,000	1.50	39	2.00	51
8,400	.75	19	1.00	26	40,000	1.62	42	2.38	61
10,600	.88	23	1.25	32	53,000	1.88	48	2.75	70
13,200	1.00	26	1.38	35	66,000	2.12	54	3.00	77
16,800	1.12	29	1.62	42	90,000	2.50	64	3.50	89
21,200	1.25	32	1.75	45					

Sling Angle

When slings are used at an angle,sling capacity is reduced. Multiply the Sling Capacity by the Factor below (for the angle used) to determine the reduced rating.

Angle	Factor	Angle	Factor
90°	1.00	55°	.819
85°	.996	50°	.766
80°	.985	45°	.707
75°	.966	40°	.643
70°	.940	35°	.574
65°	.906	30°	.500
60°	.866		



Sling capacity decreases as the angle decteases. A sling capable of lifting 1,000 lbs. in a 90°vertical basket hitch can only lift 866 lbs. at a 60°angle lift.

Additional requirements and safe operating practices may be outlined in the WSTDA-RS-1 Polyester Roundsling Standard, OSHA and ANSI/ASME B30.9 and/or other regulations as applicable.

WSTDA-RSWS-04 ©2004 TM

Wire Mesh Slings

USE, CARE AND INSPECTION REQUIREMENTS

WARNING

FAILURE TO READ, UNDERSTAND AND FOLLOW THE USE AND INSPECTION INSTRUCTIONS FURNISHED WITH EACH SLING MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH

Upon receipt of each new sling, make certain that it meets the requirements of your Purchase Order and that it has not been damaged in shipment.

ALWAYS INSPECT SLINGS BEFORE EACH USE

INSPECTION

Remove Wire Mesh Slings from service if damage such as the following is visible:

A. The stamped rated capacity information is illegible or missing.
B. Any evidence of heat or chemical damage, including melting or charring.
C. A broken weld or a broken brazed joint along the sling edge.
D. A broken wire in any part of the mesh.
E. Reduction in wire diameter of 25% due to abrasion or 15% due to corrosion.
F. Lack of flexibility or distortion of the mesh.
G. A 15% reduction of the original cross-sectional area of metal at any point around the hook opening of end fitting.
H. Metal end fittings that are cracked, pitted, corroded, excessively worn, visibly deformed or distorted out of its plane.
I. Any other visible damage which causes doubt as to the sling strength.

OPERATING PRACTICES

A. Slings shall not be loaded in excess of the rated capacity. Consideration shall be given to the effect of angles. (See Effect of Angle Chart shown on opposite side.)
B. Select slings having suitable characteristics for the type of load, hitch and environment. (See Lift-All Catalog)
C. Slings shall not be shortened by twisting, knotting or other unapproved methods.
D. Slings shall not be lengthened by knotting, choking or basketing slings together, or by any other unapproved method. Suitable fittings must be used to interconnect slings.
E. The sling shall be hitched in a manner providing control of the load.
F. Keep all portions of the human body from between the sling and the load, and from between the sling and the lifting hook.
G. Personnel should stand clear of the suspended load.
H. Personnel shall not ride the sling or a load suspended by a sling.
I. Shock loading should be avoided.
J. Twisting and kinking slings shall be avoided. Do not edge load. The full width of the mesh must contact the load during use.
K. Slings should not be pulled from under a load when the load is resting on the sling. Where practicable, use blocking to allow for easy sling removal.
L. Sharp corners in contact with the sling should be padded with material of sufficient strength to minimize damage to the sling.
M. Before lifting, make certain that the sling, attachments, and the load will not snag. Personnel shall be continuously alert to avoid snagging or bumping.
N. When lifting points are below the center of gravity, loads tend to be unstable. Proper rigging must restrict load rotation to avoid tipping and loss of load control.
O. In a basket hitch, proper slings must be selected to balance the load and restrict slippage in order to prevent the load from falling out of the sling.
P. In a choker hitch, slings shall be long enough so that the choker fitting chokes onto the sling body and never onto any fittings.
Q. In a choker hitch, the load should be balanced to prevent edge overload.
R. For lifts of nonsymmetrical loads using multiple sling legs, an analysis should be performed by a qualified person to prevent the overloading of any leg.
S. Never hammer a sling to straighten a spiral or cross rod or to force a spiral into position.
T. Slings should not be used at angles of less than 30 degrees from horizontal.
U. Slings should not be dragged on the floor or over an abrasive surface.
V. Slings should be stored in an area where they will not be subjected to mechanical damage, corrosive action, moisture, extreme heat or kinking.
W. Do not expose slings to chemicals that are not compatible with all of the sling materials. (See the Lift-All Catalog.)

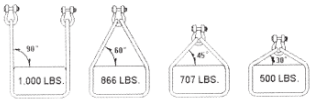
Refer to other regulations, codes and standards for additional information and safe operating practices. See OSHA CFR 1910.184 Regulations, Lift-All Catalog, ANSI/ASME B30.9.

Effect of Angle

When slings are used at an angle, sling capacity is reduced. Multiply the sling's capacity by the Factor below (for the angle used) to determine the reduced rating.

ANGLE	FACTOR	ANGLE	FACTOR	ANGLE	FACTOR
90°	1.00	65°	.906	40°	.643
85°	.996	60°	.866	35°	.574
80°	.985	55°	.819	30°	.500
75°	.966	50°	.766		
70°	.940	45°	.707		

SLING CAPACITY DECREASES AS THE ANGLE DECREASES



A sling capable of lifting 1,000 lbs. in a 90° vertical basket hitch can only lift 866 lbs. at a 60° angle, 707 lbs. at a 45° angle, and 500 lbs. at a 30° angle.

Call for information on Sling Inspections & Safety Seminars

⚠ WARNING

Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Observe rated load. Avoid sharp edges. DEATH OR INJURY can occur from improper use or care.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

ALLOY CHAIN SLINGS

INSTRUCTIONS FOR CARE, USE, INSPECTION, AND REPAIR.

CARE ♦ Store on a rack in a clean, dry place. ♦ Oil prior to prolonged storage. ♦ Do not anneal (temper) alloy chain, connecting links or hook. Hot galvanizing requires chain manufacturer advice.

USE ♦ Check weight of load. ♦ Check sling rated load for type of lift, angle of loading (see load angle chart). ♦ Avoid twists, knots or kinks. ♦ Center load on base (bowl) of hook unless hook is designed for point loading. ♦ Balance load. ♦ Avoid jerking load. ♦ Be alert for snagging of load. ♦ Maintain load control. ♦ Pad sharp corners. ♦ Keep load off sling. ♦ Avoid dragging sling over rough surfaces and from under the load. ♦ Stand clear of the load at all times. ♦ No person allowed beneath the load. ♦ Persons are not to ride on sling or load. ♦ For use in temperatures over 800°F, contact the manufacturer. ♦ When shortening chain, use only the manufacturer's recommended alloy components.

INSPECTION ♦ ***Before use***, check for excessive wear:

Chain Size Max. Wear	9/32 in. 3/64 (.046)	3/8 in. 5/64 (.078)	1/2 in. 7/64 (.109)	5/8 in. 9/64 (.140)
Chain Size Max. Wear	3/4 in. 5/32 (.158)	7/8 in. 11/64 (.171)	1 in. 3/16 (.187)	1 1/4 in. 1/4 (.250)

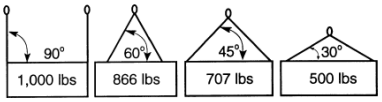
Look for bent or twisted links and cracks, nicks, gouges in chain, master links, coupling links and hooks. Look for heat damage, weld spatter, link stretch, increased hook throat opening, latch missing or damaged (if hook so equipped). **If excessive wear or damage is present, if rated load tag is missing or illegible, do not use the sling. Repair or replace it.** ***Periodic inspections*** must be recorded annually for normal service; monthly/quarterly for severe service. Only chain manufactures or other qualified persons perform periodic inspections.

REPAIR ♦ Any hazardous condition disclosed by an inspection shall require repair by chain manufacturer or other qualified person.

OVER

LOAD ANGLE CHART

Angle factor *must* be applied to calculate the reduced sling capacity when lifting force is not at 90° to the plane of the load!

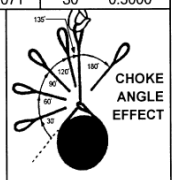


Multiply angle factor x sling's vertical rated load to calculate the reduced capacity at that angle.

Angle	Factor	Angle	Factor	Angle	Factor	Angle	Factor
90°	1.0000	70°	0.9397	55°	0.8192	40°	0.6428
80°	0.9848	65°	0.9063	50°	0.7660	35°	0.5736
75°	0.9659	60°	0.8660	45°	0.7071	30°	0.5000

Because of the greatly reduced lifting capacity, use extra care when the **horizontal** lift angle is less than 45° and do not make lifts of less than 30° load angle. *Example:* A sling rated at and lifting 1,000 pounds will be damaged – and could break suddenly–when the lifting angle is less than 30° at which angle the sling's capacity is reduced to only 500 pounds. *Important:* Use a longer sling to increase the angle which will also increase the allowable capacity.

For choker hitches, the lifting capacity is reduced by 25% or more, depending on the angle of choke.



ANGLES OF CHOKE	SLING RATED LOAD PERCENTAGE OF SINGLE LEG SLING CAPACITY
120 - 180	75%
90 - 119	65%
60 - 89	55%
30 - 59	40%

⚠ WARNING

Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Observe rated load. Avoid sharp edges. DEATH OR INJURY can occur from improper use or care.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

WIRE ROPE SLINGS

INSTRUCTIONS FOR CARE, USE, INSPECTION, AND REPAIR.

CARE ♦ Store in a clean, dry place and protect from mechanical damage, extreme heat, corrosion, or kinking. ♦ Maintain lubricated condition.

USE ♦ Check weight of load. ♦ Check sling rated load for type of lift, angle of loading (see load angle chart). ♦ Sling shall always be protected from being cut by sharp corners, sharp edges, protrusions, or abrasive surfaces. ♦ Center load on base (bowl) of hook unless hook is designed for point loading. ♦ Balance load. ♦ Avoid jerking load. ♦ Maintain load control. ♦ Be alert for snagging of load. ♦ Avoid dragging sling over rough surfaces and from under the load. ♦ Stand clear of the load at all times. ♦ No person allowed beneath the load. ♦ Persons are not to ride on sling or load. ♦ Avoid knotting, twisting and kinking the sling. ♦ Restrict use to temperatures below 400°F (fiber core wire rope 180°F) and above -60°F. ***Important:*** A single leg sling with hand tucked splice can unlay and drop the load if allowed to rotate during a lift. Always use a tag line.

INSPECTION ♦ ***Before use***, look for rope distortion, kinks, cut or broken strands, corrosion, heat damage, birdcaging, or crushing. Look at the end attachments for cracks, wear or deformation, hooks with twists or a throat opening increase. Look for *broken* wires: For strand laid and single part slings, no more than 10 broken wires in 1 lay or 5 in 1 strand in 1 lay. For cable laid and braided broken wire inspection criteria, consult the manufacturer.

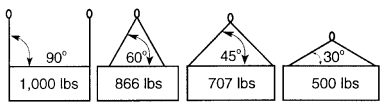
OVER

If an inspection reveals that such wear or damage is present, replace the sling. ***Frequent inspection*** is done by the person handling the sling before each use and must include all of the ***Before use*** items. ***Periodic inspections*** must be recorded at least annually for normal service; quarterly or more frequently if in severe service or nearly constant use. ***Periodic inspections*** are performed by a designated person who records the observed condition and determines when further use would be hazardous.

REPAIR ♦ Any hazardous condition disclosed by an inspection shall require replacement of the wire rope sling. Repair is not an option when damage/wear seriously reduces the sling's capacity.

LOAD ANGLE CHART

Angle factor *must* be applied to calculate the reduced sling capacity when lifting force is not at 90° to the plane of the load!



Multiply angle factor x sling's vertical rated load to calculate the reduced capacity at that angle.

Angle	Factor	Angle	Factor	Angle	Factor	Angle	Factor
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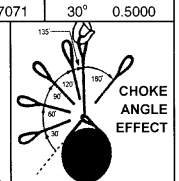
Because of the greatly reduced lifting capacity, use extra care when the **horizontal** lift angle is less than 45° and do not make lifts of less than 30° load angle. *Example:* A sling rated at and lifting 1,000 pounds will be damaged – and could break suddenly–when the lifting angle is less than 30° at which angle the sling's capacity is reduced to only 500 pounds. *Important:* Use a longer sling to increase the angle which will also increase the allowable capacity.

For choker hitches, the lifting capacity is reduced by 25% or more, depending on the angle of choke.



ANGLES OF CHOKE	SLING RATED LOAD PERCENTAGE OF SINGLE LEG SLING CAPACITY
120 - 180	75%
90 - 119	65%
60 - 89	55%
30 - 59	40%

⚠ WARNING

Wire Rope **WILL FAIL** if worn-out, overloaded, misused, damaged, improperly maintained or abused.
Wire rope failure may cause serious injury or death!

Protect yourself and others:

- **ALWAYS INSPECT** wire rope for **WEAR, DAMAGE** or **ABUSE BEFORE USE**.
- **NEVER USE** wire rope that is **WORN-OUT, DAMAGED** or **ABUSED**.
- **NEVER OVERLOAD** a wire rope.
- **INFORM YOURSELF:** Read and understand manufacturer's literature of "Wire Rope and Wire Rope Sling Safety Bulletin".*
- **REFER TO APPLICABLE CODES, STANDARDS** and **REGULATIONS** for **INSPECTION REQUIREMENTS** and **REMOVAL CRITERIA**.*

** For additional information or the BULLETIN, ask your employer or wire rope supplier.*

 Form No. 193

GLOBAL
RIGGING AND SYNTHETICS

WIRE ROPE • CHAIN • SLINGS • TESTING

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