

WIRE ROPE AND CHAIN

ph: 877.STREN-FLEX (877.787.3635)

www.stren-flex.com



 **STREN-FLEX®**
STRENGTH & FLEXIBILITY IN LIFTING



WARNING

Stren-Flex® assumes no responsibility for the misuse or misapplication of any of the products contained in this catalog. Products are provided with the express understanding that the purchaser and user are thoroughly familiar with the correct application and proper use of such products in rigging.

Improper use of rigging attachments can result in bodily injury or property damage.

To avoid injury:

- Do not exceed the working load limit.
- Sling capacity decreases as angle from horizontal decreases. Slings should not be used at angles less than 30°.
- Do not tip load or use attachments in any manner for which they were not intended.
- Do not shock or dynamically load.
- Do not apply load to latches. Latches are to retain slack slings and chain only.
- Select attachments to match the grade, size, and working load limit of the chain.
- Do not use excessively worn or damaged attachments.
- Do not use mechanical coupling links to repair alloy chains used for overhead lifting.
- When using master rings or master links, do not use oversize crane hooks where the link does not fit in the saddle of the hook.
- When using shackles, do not side load. Centerline of the load must coincide with centerline of shackle.
- Do not replace pins or bolts with other than original equipment parts.
- Use only forged carbon wire rope clips for critical or lifting applications.
- Do not use malleable iron wire rope clips for critical or lifting applications.
- Use wire rope clips in conjunction with wire rope thimbles.
- Do not move unbalanced loads.
- When using load binders, do not use a cheater bar or handle extension.
- Do not operate a load binder while anyone is on the load.
- Release lever type load binders with extreme care. Make sure everyone is clear of the load as handle may whip suddenly.

Improper use or care of chain can result in loss of load and/or personal injury.

To avoid injury:

- Do not exceed the working load limit.
- Always inspect chain before use for wear, damage, and elongation. Do not impact load or jerk chain. Apply load slowly.
- Protect chain from corrosion and high temperatures.
- Use only alloy chain and attachments for overhead lifting.
- Do not use twisted, knotted, or kinked chain.
- Select the proper grade and size chain for the application.
- Select attachments such as hooks to match the grade, size, and working load limit of the chain.
- Be aware of the environment where the chain is being used. Extreme temperatures and corrosive media can affect the working load limit of the chain.

Warning	2	Stren-Flex® 6295 McDonough Drive Norcross, GA 30093 toll free: 877.STREN-FLEX (877.787.3635) fax: 800.628.3648 fax: 770.441.0326
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SATISFACTION GUARANTEE

If you are not satisfied with any normally stocked Stren-Flex® product, you may return it for a full refund or credit at any time within 10 days following shipment. All items must be returned prepaid, and a return goods authorization number must be issued from the factory and included with the return. Returned items must be complete, undamaged, and in new condition. Special order items are not covered by the satisfaction guarantee and are subject to a restocking fee.

CAUTION

All capacities, dimensions, and other information in this catalog are subject to change without notice. Use for preliminary reference only.

WIRE ROPE BASICS

General Wire Rope Construction

Wire rope is a machine composed of a number of precise, moving parts, designed and manufactured to bear a very definite relation to one another. In fact, some wire ropes contain more moving parts than many complicated mechanisms. For example, a 6-strand rope with 49-wire strands laid around an independent wire rope core contains a total of 343 individual wires. All of these wires must work together and move with respect to one another if the rope is to have the flexibility necessary for successful operation.

Wire Rope Construction

Wire rope is composed of wires, strands, a core and lubrication. The basic unit of wire rope is wire, which is carefully processed and drawn from selected grades of steel to predetermined physical properties and sizes. A predetermined number of finished wires is then helically laid together in a uniform geometric pattern to form a strand. This process must be performed with precision and exactness to form a strand of correct size and characteristics. The required number of suitably fabricated strands are laid symmetrically with a definite length of lay around a core, forming the finished wire rope.



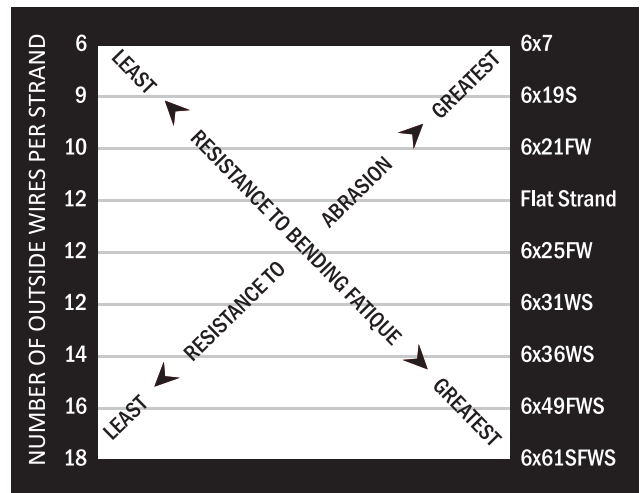
Wire Rope Construction Terminology

Wire rope is identified by its construction, or the number of strands per rope, and number of wires in each strand. For example, the construction 6 x 25 denotes a 6-strand rope, with each strand having 25 wires. Constructions having similar weights and breaking strengths are grouped into wire rope classifications, such as the 6 x 19 and 6 x 37 Classes.

The Modified X-chart

The two factors governing most decisions in selecting wire rope are abrasion resistance and resistance to bending fatigue. A graphic presentation of the balance between these properties has traditionally been given by means of the X-chart. However, new designs of wire rope, such as 6-Pac and Triple-Pac, do not follow the X-chart model as they are designed to provide both abrasion resistance and resistance to bending fatigue.

To read the Modified X-chart, the position of each rope construction must be considered in relation to both the X and Y axes, or Abrasion Resistance and Resistance to Bending Fatigue, respectively. For example, the construction 6 x 41 (6 x 49) is in the lower right quadrant, ranking high on the bending fatigue scale. However, its position in abrasion resistance is very low.



Therefore, it can be said that a 6 x 41 (6 x 49) construction offers excellent resistance to bending fatigue, but poor resistance to abrasion. At the other end of the spectrum is a 6 x 7 construction, located in the upper right quadrant of the chart. A 6 x 7 offers excellent abrasion resistance, but very poor resistance to bending fatigue.

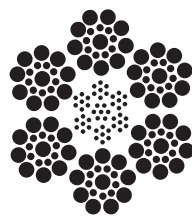
WIRE ROPE – 6 X 19 CLASS

6 x 19 Class Wire Rope

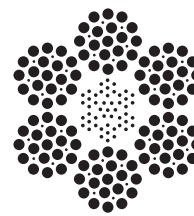
Strands: 6
 Wires per Strand: 19 to 26
 Core: IWRC or fiber core
 Standard Grade: Extra Improved (EIP)
 Lay: Regular or Lang
 Finish: Bright or Galvanized



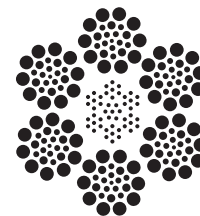
6 x 19 Warrington with Fiber Core



6 x 19 Seale with IWRC



6 x 25 Filler Wire with IWRC



6 x 26 Warrington Seale with IWRC

The 6 x 19 Classification of wire rope is widely used. 6 x 19 Class wire rope is suited to the specific needs of diverse kinds of machinery and equipment due to its wear resistance and flexibility. 6 x 19 Seale construction, with its large outer wires, provides greater resistance to abrasion and crushing. However, its resistance to fatigue is somewhat less than that offered by a 6 x 25 construction. The 6 x 25 possesses the best combination of flexibility and wear resistance in the 6 x 19 Class due to the filler wires providing support and imparting stability to the strand. The 6 x 26 Warrington Seale construction has a high resistance to crushing. This construction is a good choice where the user needs the wear resistance of a 6 x 19 Class Rope and the flexibility midway between a 6 x 19 Class and 6 x 37 Class rope.

6 x 19 Class

- 6 x 19 Seale
- 6 x 19 Warrington
- 6 x 21 Filler Wire Type U
- 6 x 21 Seale
- 6 x 25 Filler Wire Type W
- 6 x 25 Seale
- 6 x 26 Warrington Seale

SPECIFICATIONS – 6 x 19 CLASS WIRE ROPE

Rope Diameter		Nominal Strength* – Tons (bright or drawn galvanized**)						Approx. Weight (lb/ft)	
		EIP				EEIP IWRC			
		IWRC		Fiber Core					
inches	mm	Nominal Breaking Strength	Part #	Nominal Breaking Strength	Part #	Nominal Breaking Strength	Part #	IWRC	Fiber Core
1/4	6.5	3.40	04619EIPWRC	3.02	04619EIPFC	3.74	04619EEIPWRC	0.116	0.105
5/16	8.0	5.27	05619EIPWRC	4.69	05619EIPFC	5.80	05619EEIPWRC	0.18	0.164
3/8	9.5	7.55	06619EIPWRC	6.71	06619EIPFC	8.31	06619EEIPWRC	0.26	0.236
7/16	11.0	10.20	07619EIPWRC	9.09	07619EIPFC	11.20	07619EEIPWRC	0.35	0.32
1/2	13.0	13.30	08619EIPWRC	11.80	08619EIPFC	14.60	08619EEIPWRC	0.46	0.42
9/16	14.5	16.80	09619EIPWRC	14.90	09619EIPFC	18.50	09619EEIPWRC	0.59	0.53
5/8	16.0	20.60	10619EIPWRC	18.30	10619EIPFC	22.70	10619EEIPWRC	0.72	0.60
3/4	19.0	29.40	12619EIPWRC	26.20	12619EIPFC	32.30	12619EEIPWRC	1.04	0.95
7/8	22.0	39.80	14619EIPWRC	35.40	14619EIPFC	43.80	14619EEIPWRC	1.42	1.29
1	26.0	51.70	16619EIPWRC	46.00	16619EIPFC	56.90	16619EEIPWRC	1.85	1.68
1-1/8	29.0	65.00	18619EIPWRC	57.90	18619EIPFC	71.50	18619EEIPWRC	2.34	2.13
1-1/4	32.0	79.90	20619EIPWRC	71.00	20619EIPFC	87.90	20619EEIPWRC	2.89	2.63
1-3/8	35.0	96.00	22619EIPWRC	85.40	22619EIPFC	106.00	22619EEIPWRC	3.50	3.18
1-1/2	38.0	114.00	24619EIPWRC	101.00	24619EIPFC	125.00	24619EEIPWRC	4.16	3.78
1-5/8	42.0	132.00	26619EIPWRC	118.00	26619EIPFC	146.00	26619EEIPWRC	4.88	4.44
1-3/4	45.0	153.00	28619EIPWRC	136.00	28619EIPFC	169.00	28619EEIPWRC	5.67	5.15
1-7/8	48.0	174.00	30619EIPWRC	155.00	30619EIPFC	192.00	30619EEIPWRC	6.50	5.91
2	52.0	198.00	32619EIPWRC	176.00	32619EIPFC	217.00	32619EEIPWRC	7.39	6.72

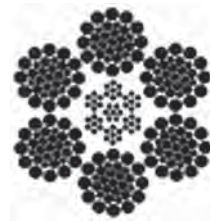
* Acceptance strength is not less than 2½% below the nominal strengths listed.

** Galvanizing: for Class A galvanized wire rope (EIP grade only), deduct 10% from the nominal strength shown.

WIRE ROPE – 6 X 37 CLASS

6 x 37 Class Wire Rope

Strands: 6
 Wires per Strand: 27 to 49
 Core: IWRC or Fiber Core
 Standard Grade: Extra Improved (EIP)
 Lay: Regular or Lang
 Finish: Bright or Galvanized



6 x 31 Warrington Seale with IWRC



6 x 36 Warrington Seale with IWRC



6 x 49 Filler Wire Seale with IWRC

The 6 x 37 Class of wire rope is characterized by the relatively large number of wires used in each strand. Ropes of this class are among the most flexible available due to the greater number of wires per strand, however their resistance to abrasion is less than ropes in the 6 x 19 Class.

6 x 37 Class

- 6 x 31 Warrington Seale
- 6 x 33 Warrington Seale
- 6 x 36 Warrington Seale
- 6 x 41 Warrington Seale
- 6 x 43 Filler Wire Seale
- 6 x 49 Filler Wire Seale

SPECIFICATIONS – 6 x 37 CLASS WIRE ROPE

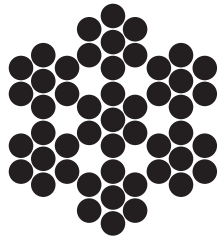
Rope Diameter		Nominal Strength* – Tons (bright or drawn galvanized**)						Approx. Weight (lb/ft)	
		EIP				EEIP IWRC			
		IWRC		Fiber Core					
inches	mm	Nominal Breaking Strength	Part #	Nominal Breaking Strength	Part #	Nominal Breaking Strength	Part #	IWRC	Fiber Core
1/4	6.5	3.40	04637EIPWRC	3.02	04637EIPFC	3.74	04637EEIPWRC	0.116	0.105
5/16	8.0	5.27	05637EIPWRC	4.69	05637EIPFC	5.80	05637EEIPWRC	0.18	0.164
3/8	9.5	7.55	06637EIPWRC	6.71	06637EIPFC	8.31	06637EEIPWRC	0.26	0.236
7/16	11.0	10.20	07637EIPWRC	9.09	07637EIPFC	11.20	07637EEIPWRC	0.35	0.32
1/2	13.0	13.30	08637EIPWRC	11.80	08637EIPFC	14.60	08637EEIPWRC	0.46	0.42
9/16	14.5	16.80	09637EIPWRC	14.90	09637EIPFC	18.50	09637EEIPWRC	0.59	0.53
5/8	16.0	20.60	10637EIPWRC	18.30	10637EIPFC	22.70	10637EEIPWRC	0.72	0.60
3/4	19.0	29.40	12637EIPWRC	26.20	12637EIPFC	32.30	12637EEIPWRC	1.04	0.95
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1-1/4	32.0	79.90	20637EIPWRC	71.00	20637EIPFC	87.90	20637EEIPWRC	2.89	2.63
1-3/8	35.0	96.00	22637EIPWRC	85.40	22637EIPFC	106.00	22637EEIPWRC	3.50	3.18
1-1/2	38.0	114.00	24637EIPWRC	101.00	24637EIPFC	125.00	24637EEIPWRC	4.16	3.78
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1-3/4	45.0	153.00	28637EIPWRC	136.00	28637EIPFC	169.00	28637EEIPWRC	5.67	5.15
1-7/8	48.0	174.00	30637EIPWRC	155.00	30637EIPFC	192.00	30637EEIPWRC	6.50	5.91
2	52.0	198.00	32637EIPWRC	176.00	32637EIPFC	217.00	32637EEIPWRC	7.39	6.72

* Acceptance strength is not less than 2½% below the nominal strengths listed.

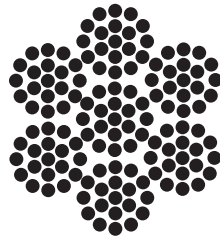
** Galvanizing: for Class A galvanized wire rope (EIP grade only), deduct 10% from the nominal strength shown.

WIRE ROPE – AIRCRAFT CABLE, ROTATION RESISTANT

Galvanized Aircraft Cable (GAC) and Stainless Steel Aircraft Cable (SSAC).



7 x 7



7 x 19

Strands: 7

Wires per Strand: 7 or 19

SPECIFICATIONS – AIRCRAFT CABLE

Wire Rope Class	Cable Dia.		Approx. Weight per 1,000 foot		Nominal Breaking Strength (lbs)		Part #
	in.	mm	lb	kg	GAC	SS	
7 x 7	1/16	1.6	7.5	3.4	480	480	IMWR0177*AC
	3/32	2.4	16	7.3	920	920	IMWR01577*AC
	1/8	3.2	28	12.7	1700	1700	IMWR0277*AC
	5/32	3.9	43	19.5	2600	2600	IMWR02577*AC
	3/16	4.8	62	28.1	3700	3700	IMWR0377*AC
7 x 19	3/32	2.4	17	7.7	1000	-	IMWR015719*AC
	1/8	3.2	29	13.2	2000	1760	IMWR02719*AC
	5/32	3.9	45	20.4	2800	2400	IMWR025719*AC
	3/16	4.8	65	29.5	4200	3700	IMWR03719*AC
	1/4	6.3	110	50.0	7000	6400	IMWR04719*AC
	5/16	7.9	173	78.5	9800	9000	IMWR05719*AC
	3/8	9.5	243	110.2	14400	12000	IMWR06719*AC

* Insert (G) for Galvanized or (SS) for Stainless Steel.

19 x 7 Class Rotation-Resistant Wire Rope



Strands: 19

Wires per Strand: 7

Core: WSC

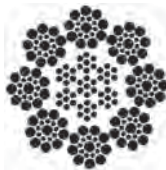
Standard Grade: Extra Improved (EIP)

Lay: Regular

Finish: Bright

19 x 7 is recommended for hoisting unguided loads with a single-part line. The rotation-resistant properties of this rope are secured by two layers of strands. The inner strands are left lay, while the 12 outer strands are right lay, which enables one layer to counteract the other layer's rotation. The rotation-resistant characteristics of the 19 x 7 wire ropes are superior to those of the 8 x 19 Class wire ropes.

8 x 19 Class Rotation-Resistant Wire Rope



Strands: 8

Wires per Strand: 19 to 25

Core: IWRC

Standard Grade: Extra Improved (EIP)

Lay: Right Regular

Finish: Bright

8 x 19 Classification rotation-resistant ropes are recommended for hoisting unguided loads with a single-part or multi-part line. Outer strands are right lay and inner strands are left lay. 8x19 ropes are slightly stronger and significantly more rugged than the 19 x 7 construction. However, the rotation-resistant properties of the 8 x 19 rotation-resistant ropes are much less than those of the 19 x 7 construction. 8 x 19 Seale and 8 x 25 Filler Wire constructions available.

SPECIFICATIONS – 19 x 7 CLASS WIRE ROPE

Rope Diameter		Approx. Weight	Nominal Strength* EIP	Part #
inches	mm			
3/16	4.8	0.064	1.57	03197EIPWSC
1/4	6.5	0.113	2.77	04197EIPWSC
5/16	8.0	0.177	4.30	05197EIPWSC
3/8	9.5	0.250	6.15	06197EIPWSC
7/16	11.0	0.350	8.33	07197EIPWSC
1/2	13.0	0.450	10.80	08197EIPWSC
9/16	14.5	0.580	13.60	09197EIPWSC
5/8	16.0	0.710	16.80	10197EIPWSC
3/4	19.0	1.020	24.00	12197EIPWSC
7/8	22.0	1.390	32.50	14197EIPWSC
1	26.0	1.820	42.20	16197EIPWSC
1-1/8	29.0	2.300	53.10	18197EIPWSC
1-1/4	32.0	2.840	65.10	20197EIPWSC
1-3/8	35.0	3.430	78.40	22197EIPWSC
1-1/2	38.0	4.080	92.80	24197EIPWSC

SPECIFICATIONS – 8 x 19 CLASS WIRE ROPE

Rope Diameter		Approx. Weight	Nominal Strength* EIP	Part #
inches	mm			
1/2	13.0	0.47	11.7	08819EIPWRC
9/16	14.5	0.60	14.7	09819EIPWRC
5/8	16.0	0.73	18.1	10819EIPWRC
3/4	19.0	1.06	25.9	12819EIPWRC
7/8	22.0	1.44	35.0	14819EIPWRC
1	26.0	1.88	45.5	16819EIPWRC
1-1/8	29.0	2.39	57.3	18819EIPWRC
1-1/4	32.0	2.94	70.5	20819EIPWRC
1-3/8	35.0	3.56	84.9	22819EIPWRC
1-1/2	38.0	4.24	100.0	24819EIPWRC

* Acceptance strength is not less than 2½% below the nominal strengths listed.

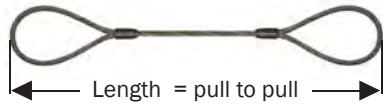
WIRE ROPE SLING BASICS

Stren-Flex® wire rope slings are manufactured to comply with our own strict quality control and testing standards. All Stren-Flex® products are manufactured exclusively in the United States with the highest quality imported and domestic materials and components.

Stren-Flex® manufactures all products with a simple mission – to provide the highest quality, most durable, and safest material handling device available. Further, every Stren-Flex® lifting product undergoes a thorough inspection and rigorous quality control testing. All Stren-Flex® products exceed current OSHA and ANSI standards – making Stren-Flex® lifting products the leader when it comes to **“strength and flexibility”** in the rigging industry.

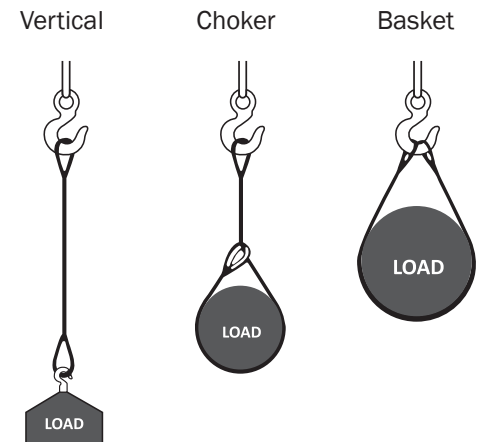
How to order wire rope slings:

1. Determine the weight of the load.
2. Determine the type of hitch to be used. One of the basic hitches (top right) is suitable for most lifts.
3. Determine the type of sling to be used. (Will the sling have eyes, hooks or thimbles?)
4. Length of the sling measured from pull to pull.



5. Wire rope construction if not standard 6 x 19 or 6 x 37.
6. Double check diameter, length and sling type with the WLL (Working Load Limit).

BASIC SLING HITCHES

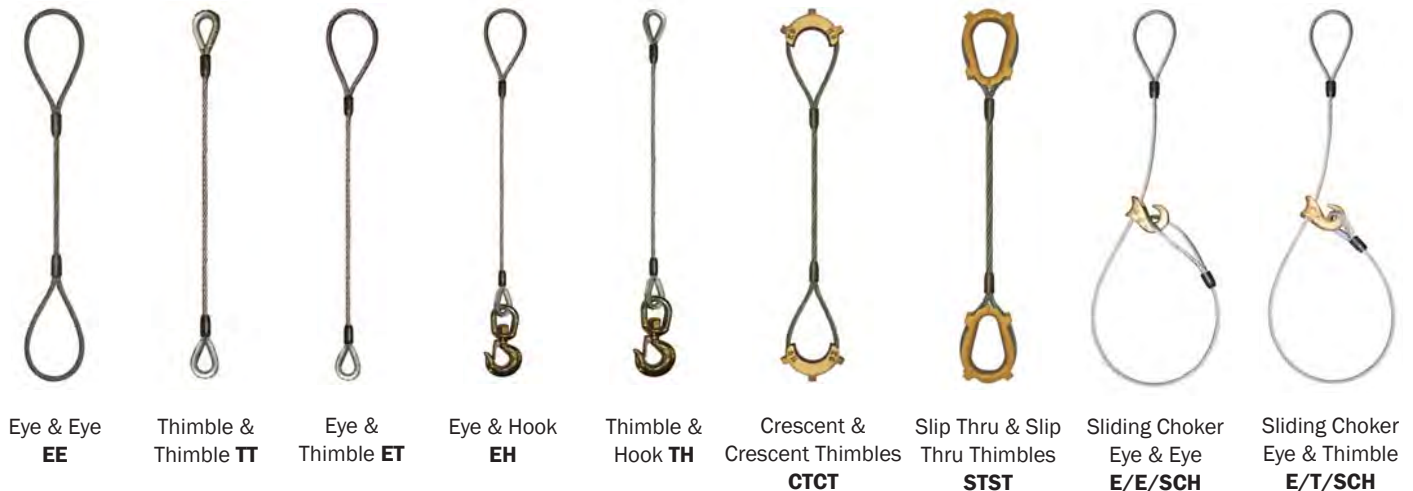


FLEMISH EYE WITH MECHANICAL SPLICE.






Wire rope slings are strong, efficient and reliable accessories in the material handling industry. Wire rope functions as an excellent sling material in applications where a combination of strength and abrasion are necessary. Wire rope slings are available in an array of lengths and configurations to fit almost any application. Stren-Flex® features wire rope slings made with high quality domestic wire rope that are tagged with all appropriate ASME information and capacities. Import wire rope slings are also available.

Wire Rope Sling Types



SINGLE LEG WIRE ROPE SLINGS

SPECIFICATIONS – SINGLE LEG WIRE ROPE SLINGS

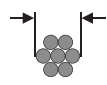







Wire Rope Class	Rope Dia. (in.)	Domestic Part #	Import Part #	Single Leg Rated Capacity (Tons)			Min. Sling Length w/ Standard Eyes
				Vertical 	Choker 	Basket 	
6 x 19	1/4	WRS04 ^{^^}	IMWRS04 ^{^^}	0.65	0.48	1.3	1' 6"
	5/16	WRS05 ^{^^}	IMWRS05 ^{^^}	1	0.74	2	1' 9"
	3/8	WRS06 ^{^^}	IMWRS06 ^{^^}	1.4	1.1	2.8	2' 0"
	7/16	WRS07 ^{^^}	IMWRS07 ^{^^}	1.9	1.4	3.8	2' 3"
	1/2	WRS08 ^{^^}	IMWRS08 ^{^^}	2.5	1.9*	5	2' 6"
	9/16	WRS09 ^{^^}	IMWRS09 ^{^^}	3.2	2.4	6.4	2' 9"
	5/8	WRS10 ^{^^}	IMWRS10 ^{^^}	3.9	2.9*	7.8	3' 0"
	3/4	WRS12 ^{^^}	IMWRS12 ^{^^}	5.6	4.1*	11	3' 6"
	7/8	WRS14 ^{^^}	IMWRS14 ^{^^}	7.6	5.6	15	4' 0"
	1	WRS16 ^{^^}	IMWRS16 ^{^^}	9.8	7.2	19.6	4' 6"
6 x 37	1-1/8	WRS18 ^{^^}	IMWRS18 ^{^^}	12	9.1	24	5' 0"
	1-1/4	WRS20 ^{^^}	IMWRS20 ^{^^}	15	11	30	5' 6"
	1-3/8	WRS22 ^{^^}	IMWRS22 ^{^^}	18	13	36	6' 0"
	1-1/2	WRS24 ^{^^}	IMWRS24 ^{^^}	21	16*	42	7' 0"

* Call Stren-Flex® for reduced choker capacity when using sliding choker hooks.

^{^^} Insert Length when ordering.

** Insert Type when ordering.

DIMENSIONS – SINGLE LEG WIRE ROPE SLINGS

Wire Rope Class	Rope Dia. (in.)	Standard Eye Size W x L (in.)	Thimble Eye Size W x L (in.)	Eye Hook Capacity W x L (tons)	Crescent Thimble Eye Size W x L (in.)	Slip-thru Thimble Eye Size W x L (in.)	Sliding Choker Hook (in.)	Oblong Size** (in.)
								
6 x 19	1/4	2 x 4	7/8 x 1-5/8	1	2 x 4	2-1/8 x 4-1/8	3/8	.437
	5/16	2-1/2 x 5	1-1/16 x 1-7/8	1	2 x 4	2-1/8 x 4-1/8	3/8	.437
	3/8	3 x 6	1-1/8 x 2-1/8	1-1/2	2 x 4	2-1/8 x 4-1/8	3/8	.437
	7/16	3-1/2 x 7	1-1/4 x 2-1/4	2	2 x 5	2-3/8 x 4-3/8	1/2	.437
	1/2	4 x 8	1-1/2 x 2-3/4	3	2-1/4 x 6	2-3/8 x 4-3/8	1/2*	.512
	9/16	4-1/2 x 9	1-1/2 x 2-3/4	4-1/2	2-1/4 x 7	2-3/8 x 4-3/8	5/8	.63
	5/8	5 x 10	1-3/4 x 3-1/4	4-1/2	2-3/4 x 7	3-3/8 x 6-5/8	5/8*	.63
	3/4	6 x 12	2 x 3-3/4	7	3-1/4 x 8-1/2	3-3/8 x 6-5/8	3/4*	.75
	7/8	7 x 14	2-1/4 x 4-1/4	11	4-1/2 x 10	3-3/4 x 7-1/8	7/8	.875
	1	8 x 16	2-1/2 x 4-1/2	11	4-1/2 x 11-1/2	3-3/4 x 7-1/8	1	1.024
6 x 37	1-1/8	9 x 18	2-7/8 x 5-1/8	15	4-7/8 x 13	4-3/8 x 8-3/8	1-1/8	1.024
	1-1/4	10 x 20	2-7/8 x 5-1/8	15	5-1/2 x 14-1/2	4-3/8 x 8-3/8	1-1/4	1.25
	1-3/8	11 x 22	3-1/2 x 6-1/4	22	6 x 16	5 x 9-1/2	1-3/8	1.25
	1-1/2	12 x 24	3-1/2 x 6-1/4	22	6 x 17-1/2	5 x 9-1/2	1-1/2*	1.5

* Call Stren-Flex® for reduced choker capacity when using sliding choker hooks.

** See page 22 for oblong specifications & dimensions.

MULTIPLE LEG WIRE ROPE BRIDLE SLINGS & THIMBLES

2-Leg Bridle



3-Leg Bridle



4-Leg Bridle



MULTIPLE LEG WIRE ROPE BRIDLE SLINGS

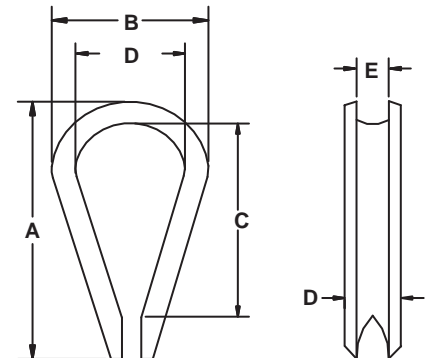
Rope Class	Rope Dia. (in.)	Min. Leg Length (ft)	Hook WLL* (tons)	EIP, IWRC											
				Two Legs				Three Legs				Four Legs			
				WLL (tons)			Oblong Size** (in.)	WLL (tons)			Oblong Size** (in.)	WLL (tons)			Oblong Size** (in.)
				60°	45°	30°		60°	45°	30°		60°	45°	30°	
6 x 19	1/4	1.5	3/4	1.1	.91	.65	.437	1.7	1.4	.97	.437	2.2	1.8	1.3	.512
	5/16	2	1	1.7	1.4	1	.437	2.6	2.1	1.5	.512	3.5	2.8	2	.630
	3/8	2	1-1/2	2.5	2	1.4	.512	3.7	3	2.2	.630	5	4.1	2.9	.750
	7/16	2.5	2	3.5	2.7	1.9	.512	5	4.1	2.9	.750	6.7	5.5	3.9	.750
	1/2	2.5	3	4.4	3.6	2.5	.63	6.6	5.4	3.8	.750	8.8	7.1	5.1	1.024
	9/16	3	3	5.5	4.5	3.2	.75	8.3	6.8	4.8	.875	11	9	6.4	1.024
	5/8	3	5	6.8	5.5	3.9	.75	10	8.3	5.9	1.024	14	11	7.8	1.260
	3/4	3.5	5	9.7	7.9	5.6	1.024	15	12	8.4	1.260	19	16	11	1.500
	7/8	4	7-1/2	13	11	7.6	1.024	20	16	11	1.500	26	21	15	1.500
	1	4.5	10	17	14	9.8	1.250	26	21	15	1.500	34	28	20	1.750
1-1/8	5.0	10	21	17	12	1.500	31	26	18	1.750	42	34	24	2.000	
6 x 37	1-1/4	5.0	15	26	21	15	1.500	38	31	22	2.000	51	42	30	2.250
	1-3/8	5.5	15	31	25	18	1.750	46	38	27	2.000	62	50	36	2.500
	1-1/2	6	22	37	30	21	2.000	55	45	32	2.250	73	60	42	2.500

* Working Load Limit, based on standard carbon fittings unless otherwise noted.

** See page 22 for oblong specifications & dimensions.

HEAVY DUTY WIRE ROPE THIMBLES (HOT GALVANIZED)

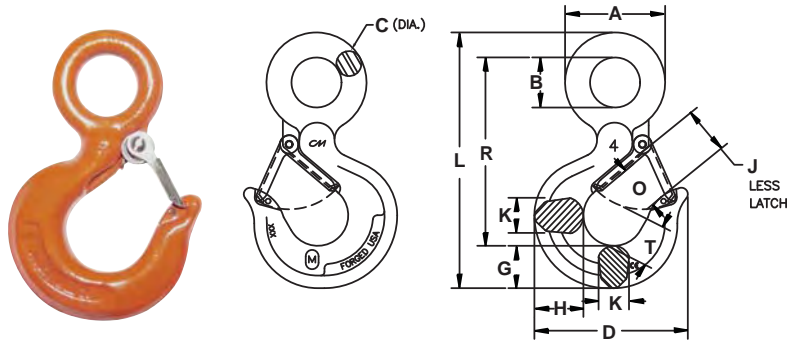
Rope Diameter	Part #	Standard Pack	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	Weight (lb)
1/4	IMTH04	25	2.19	1.5	1.63	0.88	0.41	0.075
5/16	IMTH05	25	2.5	1.81	1.88	1.06	0.5	0.14
3/8	IMTH06	25	2.88	2.13	2.13	1.13	0.66	0.25
1/2	IMTH08	25	3.63	2.56	2.75	1.5	0.84	0.51
5/8	IMTH10	10	4.25	3	3.25	1.75	1	0.75
3/4	IMTH12	10	5	3.5	3.75	2	1.25	1.47
7/8	IMTH14	10	5.5	4	4.25	2.25	1.38	1.85



RIGGING HOOKS

Rigging Hook

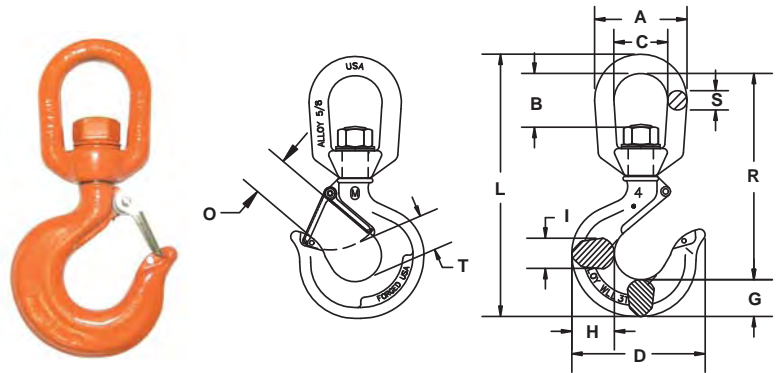
- Built-in distortion detectors
- Design factor 5:1
- Load rating marked on each hook body
- Hook and latch assemblies furnished separately
- Carbon hooks have a clear protective coating to resist rust and for cleaner handling (use suffix "C" when ordering carbon clear finish, use suffix "G" when ordering hot dip galvanized).



Alloy			Carbon			Dimensions												Weight (lb)
WLL (lb)	Hook Part #	Latch Part #	WLL (lb)	Hook Part #	Latch Part #	A (in.)	B (in.)	C (in.)	D (in.)	G (in.)	H (in.)	J (in.)	K (in.)	L (in.)	O (in.)	R (in.)	T (in.)	
2,205	M6402A	4X1302	1,654	M6402C	4X1302	1.50	0.75	0.38	3.06	0.87	1.05	0.93	0.63	4.37	0.93	3.13	0.87	0.66
3,308	M6403A	4X1303	2,205	M6403C	4X1303	1.75	0.88	0.44	3.33	0.94	1.11	0.97	0.71	5.04	0.97	3.66	0.97	1.12
4,410	M6404A	4X1304	3,308	M6404C	4X1304	2.13	1.13	0.50	3.67	1.06	1.21	1.06	0.88	5.63	1.06	4.09	1.03	1.46
6,615	M6405A	4X1305	4,410	M6405C	4X1305	2.50	1.25	0.63	4.20	1.27	1.43	1.19	0.94	6.55	1.16	4.67	1.16	2.42
11,025	M6407A	4X1307	6,615	M6407C	4X1307	3.06	1.56	0.75	5.11	1.44	1.63	1.50	1.31	7.97	1.41	5.78	1.53	4.10
15,435	M6409A	4X1309	11,025	M6409C	4X1309	3.88	2.00	0.94	6.24	1.82	2.01	1.78	1.68	10.07	1.69	7.31	1.94	8.16
24,255	M6411A	4X1311	16,538	M6411C	4X1311	4.69	2.44	1.13	7.89	2.25	2.63	2.38	1.88	12.41	2.19	9.03	2.52	15.60
33,075	M6415A	4X1315	20,500	M6415C	4X1315	5.34	2.84	1.25	8.37	2.59	2.94	2.50	2.19	14.05	2.30	10.21	2.54	21.58
48,510	M6422A	4X1322	33,075	M6422C	4X1322	6.63	3.50	1.56	10.19	3.00	3.50	3.30	2.69	17.37	3.12	12.81	2.73	39.89

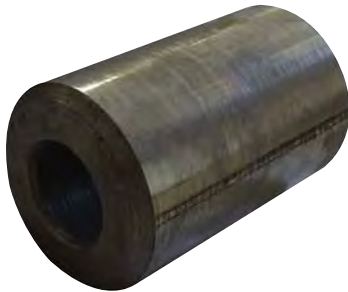
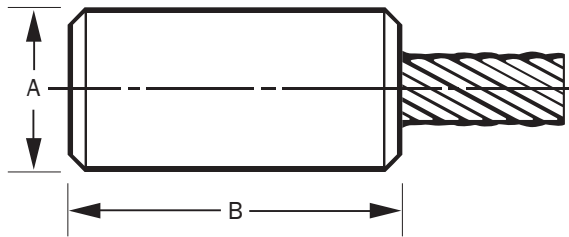
Swivel Rigging Hook

- Built-in distortion detectors
- Design factor 5:1
- Hook and latch assemblies furnished separately
- Painted orange
- Carbon swivel hooks are technically advanced Micro-alloy which requires no secondary heat treat
- Alloy swivel hooks are heat-treated quenched and tempered



Alloy			Carbon			Dimensions												Weight (lb)
WLL (lb)	Hook Part #	Latch Part #	WLL (lb)	Hook Part #	Latch Part #	A (in.)	B (in.)	C (in.)	D (in.)	G (in.)	H (in.)	I (in.)	L (in.)	R (in.)	S (in.)	T (in.)	O (in.)	
2,205	M3402A	4X1302	1,654	M3402C	4X1302	2.00	1.11	1.25	3.06	0.87	1.05	0.63	5.83	4.63	0.38	0.87	0.93	1.05
3,308	M3403A	4X1303	2,205	M3403C	4X1303	2.50	1.38	1.50	3.33	0.94	1.11	0.71	6.83	5.44	0.50	0.97	0.97	1.56
4,410	M3404A	4X1304	3,308	M3404C	4X1304	3.00	1.65	1.75	3.67	1.06	1.21	0.88	7.76	6.25	0.63	1.03	1.06	2.50
6,615	M3405A	4X1305	4,410	M3405C	4X1305	3.00	1.65	1.75	4.20	1.27	1.43	0.94	8.40	6.49	0.63	1.16	1.16	3.20
11,025	M3407A	4X1307	6,615	M3407C	4X1307	3.50	1.77	2.00	5.11	1.44	1.63	1.31	9.76	7.53	0.75	1.53	1.41	5.36
15,435	M3409A	4X1309	11,025	M3409C	4X1309	4.75	2.39	2.75	6.24	1.82	2.01	1.68	12.42	9.67	1.00	1.94	1.69	10.56
24,255	M3411A	4X1311	15,435	M3411C	4X1311	5.50	2.55	3.25	7.69	2.25	2.63	1.88	14.89	12.06	1.13	2.46	2.22	19.00
33,060	M3415A	4X1315	22,040	M3415C	4X1315	6.00	2.47	3.50	8.37	2.59	2.94	2.19	15.79	11.95	1.25	2.62	2.23	26.75
48,488	M3422A	4X1322	33,060	M3422C	4X1322	7.75	3.82	4.75	10.19	3.00	3.50	2.69	21.18	16.68	1.50	2.74	3.05	51.80

HOIST CABLE & WINCH LINES



Hoist Cable Assemblies

Stren-Flex® manufactures replacement cables for wire rope hoists. Hoist cable assemblies can be made to custom specifications given construction, length, and fittings needed. Ferrule sizes other than those shown are available.



Winch Lines

Winch lines are typically made with 6 x 19 construction wire rope with an independent wire rope core for improved strength and abrasion resistance. For more flexibility, wire rope with a fiber core can be used.

- High quality flemish eye splice with mechanical swage
- Heavy duty thimble eye
- Carbon or alloy hooks with latch

AFTER SWAGE DIMENSIONS

Rope Dia. (in.)	Part #	A	B
3/16	ASC-1060-6	1/2	7/8
	ASC-1426-1.00	3/4	1-1/8
1/4	ASC-1060-8A	1/2	1-1/8
	ASC-1060-8	5/8	1-1/8
	ASC-1184-.75	3/4	1
	ASC-1278-1.06	1	1-1/4
5/16	ASC-1060-10A	5/8	1-3/8
	ASC-1060-10	3/4	1-1/2
	ASC-FB-10-2	11/16	1
	ASC-1255	7/8	7/8
	ASC-1064-1.10	7/8	1-5/16
3/8	ASC-1092-1.22	1	1-1/2
	ASC-1104-.94	1	1-3/16
	ASC-1094	3/4	1-9/16
	ASC-1060-12A	3/4	1-3/4
7/16	ASC-1060-12	7/8	1-3/4
	ASC-1256-1.75	7/8	1-3/4
	ASC-1060-14	1	2
1/2	ASC-4150	1-1/8	2
	ASC-1959	7/8	2-1/2
	ASC-1060-16A	1	2-1/4
9/16	ASC-1060-16	1-1/8	2-3/8
	ASC-1356	1	2-1/2
	ASC-4016	1-1/8	2-1/4
	ASC-1060-18	1-1/4	2-1/2

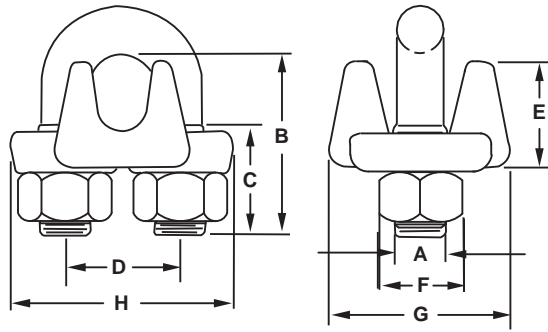
WINCH LINE SPECIFICATIONS

Cable Diameter (in.)	Part #	Nominal Breaking Strength (lbs)		Hook Capacity (ton)
		Fiber Core	IWRC	
3/8	IMWLO6X**^^3TSH	13,420	15,100	3
7/16	IMWLO7X**^^4.5TSH	18,180	20,400	4.5
1/2	IMWLO8X**^^4.5TSH	23,600	26,600	4.5
9/16	IMWLO9X**^^4.5TSH	29,800	33,600	4.5
5/8	IMWL10X**^^7TSH	36,600	41,200	7

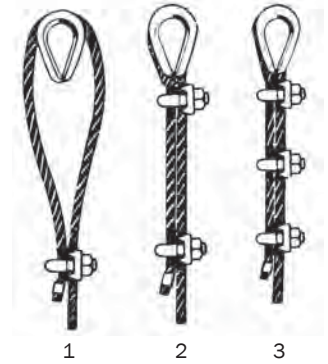
* See page 11 for Hook Specifications and Dimensions
 ** Insert Cable Length
 ^^ Insert (FC) for Fiber Core or (SC) for IWRC

WIRE ROPE CLIPS

DROP FORGED WIRE ROPE CLIPS



Proper use of wire rope clips

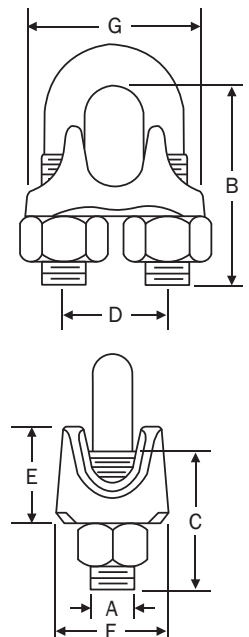


Size (in.)	Part #	Dimensions								Min. No. Clips	Torque (ft/lb)	Rope Turnbuckle	Weight (lb)
		A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)				
1/8*	M244	12 - 24	23/32	7/16	15/32	13/32	3/8	13/16	15/16	2	4-1/2	3-1/4	5
3/16*	M245	1/4 - 20	31/32	9/16	19/32	1/2	1/2	15/16	1-5/32	2	7-1/2	3-3/4	9
1/4	M246	5/16 - 18	1-1/32	1/2	3/4	31/32	9/16	1-3/16	1-7/16	2	15	4-3/4	18
5/16	M247	3/8 - 16	1-3/8	3/4	7/8	23/32	11/16	1-5/16	1-11/16	2	30	5-1/4	30
3/8	M248	7/16 - 14	1-1/2	3/4	1	29/32	3/4	1-5/8	1-15/16	2	45	6-1/2	42
7/16	M249	1/2 - 13	1-7/8	1	1-3/16	1-1/16	7/8	1-25/32	2-5/16	2	65	7	70
1/2	M250	1/2 - 13	1-7/8	1	1-3/16	1-1/8	7/8	1-29/32	2-5/16	3	65	11-1/2	75
9/16	M296	9/16 - 12	2-3/8	1-1/4	1-5/16	1-1/4	15/16	1-31/32	2-1/2	3	95	12	100
5/8	M251	9/16 - 12	2-3/8	1-1/4	1-5/16	1-11/32	15/16	2	2-1/2	3	95	12	100
3/4	M252	5/8 - 11	2-3/4	1-7/16	1-1/2	1-7/16	1-1/16	2-11/32	2-13/16	4	130	18	150
7/8	M253	3/4 - 10	3-1/8	1-5/8	1-3/4	1-19/32	1-1/4	2-7/16	3-5/32	4	225	20	240
1	M254	3/4 - 10	3-1/2	1-13/16	1-7/8	1-25/32	1-1/4	2-5/8	3-5/32	5	225	26	250
1-1/8	M255	3/4 - 10	3-7/8	2	2	1-25/32	1-1/4	2-13/16	3-19/32	6	225	34	310
1-1/4	M256	7/8 - 9	4-1/4	2-1/8	2-5/16	2-3/16	1-7/16	3-1/8	4-1/8	7	360	37	460
1-3/8	M257	7/8 - 9	4-5/8	2-5/16	2-3/8	2-1/4	1-7/16	3-1/8	4-1/4	7	360	44	520
1-1/2	M258	7/8 - 9	4-15/16	2-3/8	2-19/32	2-1/2	1-7/16	3-1/8	4-7/16	8	360	48	590

Malleable Wire Rope Clips

Used for light duty, non-critical applications only. Typical uses include guard lines and fencing. Do not use malleable wire rope clips for critical or lifting applications. Load may be suddenly released resulting in injury or death.

Size (in.)	Part #	Min. Clips Req'd.	Amt. Wire Rope to turn back (in.)	Torque (ft/lb)	Dimensions (in.)*							Approx. Weight (lb)
					A	B	C	D	E	F	G	
1/16*	IMMC01	3	4	2	.15	.65	.45	.38	.38	.45	.69	.03
1/8*	IMMC02	3	4-3/4	3	.18	.81	.5	.5	.5	.56	.94	.04
3/16	IMMC03	3	5-1/2	4.5	.25	.94	.56	.56	.56	.63	1.06	.063
1/4	IMMC04	3	7	15	.31	1.19	.75	.75	.69	.75	1.31	.13
5/16	IMMC05	3	7-3/4	15	.31	1.31	.84	.75	.75	.75	1.44	.15
3/8	IMMC06	3	9-1/2	30	.38	1.63	1	.88	.84	.88	1.63	.21
7/16	IMMC07	4	10-1/4	40	.44	2	1.19	1.06	1	1.06	1.88	.37
1/2	IMMC08	4	15-1/4	45	.44	2	1.19	1.06	1	1.06	1.88	.37
9/16	IMMC09	4	16	50	.5	2.31	1.38	1.25	1.25	1.28	2.09	.59
5/8	IMMC10	4	16	75	.5	2.31	1.38	1.25	1.25	1.28	2.09	.59
3/4	IMMC12	5	22-1/4	75	.56	2.56	1.56	1.31	1.44	1.56	2.38	.84
7/8	IMMC14	5	23-1/2	130	.63	3.06	1.81	1.63	1.75	1.81	2.88	1.25
1	IMMC16	6	31	130	.63	3.44	2	1.88	2.06	2	3	1.66
1-1/8	IMMC18	7	39	200	.75	4	2.75	2	2.19	2.06	3.38	2.43

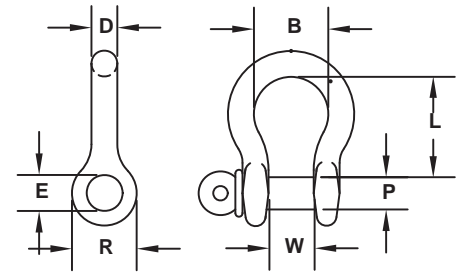


1/16" and 1/8" are not covered by Federal Specification FF-C-450 D. CAUTION: Never use any wire rope clip to directly connect two straight lengths of wire rope.

* Dimensions may vary.

SHACKLES

- All CM shackles meet or exceed Federal Specification RRC-271D
- Working Load Limit shown as permanent marking on body
- Available in painted, galvanized and self-colored finishes (CM only). Import models available in galvanized finish only.
- Alloy pin
- Heat treated and tempered



SHACKLES

Size (in.)	Working Load Limit (tons)			P* (in.)	E* (in.)	W* (in.)	R* (in.)	L* (in.)	B min.* (in.)	Weight* (lb)
	CM Carbon	CM Alloy	Import Carbon							
3/16	1/2	n/a	1/3	0.250	0.307	0.375	0.625	0.875	0.562	0.06
1/4	3/4	n/a	1/2	0.312	0.401	0.469	0.875	1.125	0.75	0.12
5/16	1	n/a	3/4	0.375	0.463	0.531	1	1.25	0.812	0.2
3/8	1-1/2	2	1	0.438	0.531	0.656	1.125	1.437	0.937	0.3
7/16	2	2.6	1-1/2	0.5	0.593	0.75	1.25	1.689	1.062	0.5
1/2	3	3.3	2	0.625	0.718	0.813	1.375	1.875	1.187	0.75
5/8	4-1/2	5	3-1/4	0.75	0.843	1.063	1.875	2.375	1.5	1.3
3/4	6-1/2	7	4-3/4	0.875	0.968	1.25	2.125	2.813	1.75	2.3
7/8	8-1/2	9.5	6-1/2	1	1.109	1.438	2.375	3.312	2	3.5
1	10	12.5	8-1/2	1.125	1.234	1.688	2.625	3.75	2.312	5
1-1/8	12	15	9-1/2	1.25	1.375	1.812	2.875	4.25	2.625	7
1-1/4	14	18	12	1.375	1.531	2.031	3.25	4.688	2.875	9.5
1-3/8	17	21	13-1/2	1.5	1.656	2.25	3.5	5.25	3.25	12.5
1-1/2	20	30	17	1.625	1.781	2.375	3.75	5.75	3.375	17.2
1-5/8	24	35	24	1.75	1.906	2.625	4.125	6.25	4	23.5
1-3/4	30	40	25	2	2.156	2.875	4.5	7	4.5	27.7
2	35	50	35	2.25	2.406	3.25	5.25	7.75	5.25	39

* Dimensions & weights are for CM shackles. Import models may vary.

SHACKLE PART NUMBERS

Size (in.)	CM Carbon	CM Alloy	Import Carbon
3/16	M645*	n/a	IMSPASCG03
1/4	M646*	n/a	IMSPASCG04
5/16	M647*	n/a	IMSPASCG05
3/8	M648*	M648A*	IMSPASCG06
7/16	M649*	M649A*	IMSPASCG07
1/2	M650*	M650A*	IMSPASCG08
5/8	M651*	M651A*	IMSPASCG10
3/4	M652*	M652A*	IMSPASCG12
7/8	M653*	M653A*	IMSPASCG14
1	M654*	M654A*	IMSPASCG16
1-1/8	M655*	M655A*	IMSPASCG18
1-1/4	M656*	M656A*	IMSPASCG20
1-3/8	M666*	M666A*	IMSPASCG22
1-1/2	M657*	M657A*	IMSPASCG24
1-5/8	M685*	M685A*	IMSPASCG26
1-3/4	M677*	M677A*	IMSPASCG28
2	M658*	M658A*	IMSPASCG32

OTHER TYPES AVAILABLE:



Round Pin



Safety (Bolt & Nut)



Chain Shackles

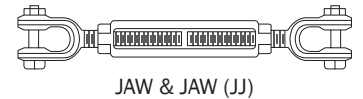


Web Shackles

* Insert (P) for Painted finish; (G) for Galvanized finish; blank for self-colored.

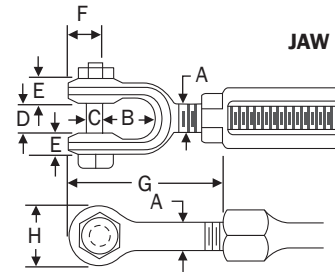
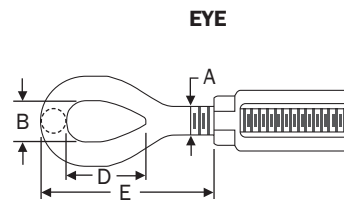
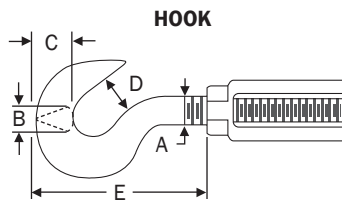
TURNBUCKLES

Size (in) (Diameter x Take-Up)	Part #	Working Load Limit (lb)		Average Overall Length with Ends in Closed Position	Approx. Weight (lb)		
		Hook & Hook Hook & Eye	Eye & Eye Jaw & Eye Jaw & Eye		Eyes and/or Hooks	Jaw & Eye	Jaw & Jaw
1/4 x 4	IMTB0404**	400	500	8.25	.3	.3	.4
5/16 x 4-1/2	IMTB0504**	700	800	9.56	.5	.53	.58
3/8 x 6	IMTB0606**	1,000	1,200	11.88	.75	.82	.93
1/2 x 6	IMTB0806**	1,500	2,200	13.31	1.5	1.62	1.68
1/2 x 9	IMTB0809**	1,500	2,200	16.31	1.75	1.82	1.85
1/2 x 12	IMTB0812**	1,500	2,200	19.31	2.18	2.19	2.2
5/8 x 6	IMTB1006**	2,250	3,500	15.50	2.63	2.69	2.82
5/8 x 9	IMTB1009**	2,250	3,500	18.50	3	3.01	3.25
5/8 x 12	IMTB1012**	2,250	3,500	21.50	3.25	3.5	3.75
3/4 x 6	IMTB1206**	3,000	5,200	17	3.75	4.25	4.68
3/4 x 9	IMTB1209**	3,000	5,200	20	4.5	5	5.38
3/4 x 12	IMTB1209**	3,000	5,200	23	5.75	5.75	6.12



** Specify type: (EE) Eye & Eye; (HH) Hook & Hook; (HE) Hook & Eye; (JJ) Jaw & Jaw; (JE) Jaw & Eye.

Hooks not supplied on sizes larger than 1-1/2" diameter. Jaw ends up to 5/8". Fitted with bolt and nut. Jaw ends 3/4" & up: fitted with pin and cotter.



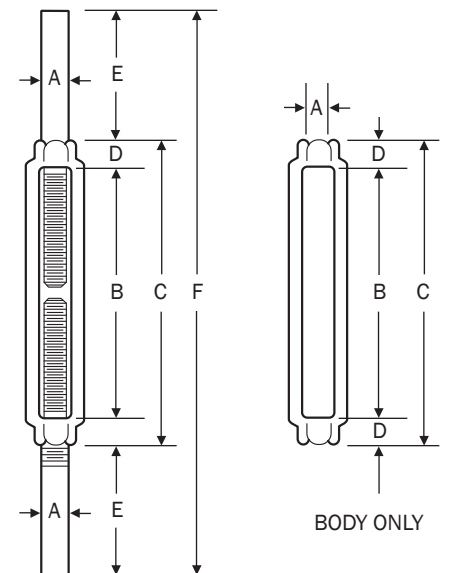
Dimensions (in.)				
A	B	C	D	E
1/4	.25	.41	.45	1.66
5/16	.31	.44	.50	1.91
3/8	.38	.53	.56	2.28
1/2	.50	.69	.66	2.84
5/8	.63	.84	.84	3.53
3/4	.75	1.00	.97	4.31

Dimensions (in.)				
A	B	C	D	E
1/4	.34	.22	.78	1.78
5/16	.44	.28	.94	2.19
3/8	.53	.34	1.13	2.56
1/2	.72	.44	1.44	3.22
5/8	.88	.50	1.75	3.88
3/4	1.00	.63	2.13	4.69

Dimensions (in.)							
A	B	C	D	E	F	G	H
1/4	.63	.28	.41	.28	.50	1.63	.63
5/16	.88	.28	.47	.28	.50	2.00	.69
3/8	.88	.31	.50	.31	.59	2.19	.81
1/2	1.06	.41	.63	.41	.75	2.75	1.00
5/8	1.31	.50	.75	.50	1.03	3.50	1.31
3/4	1.50	.56	.94	.56	1.28	4.13	1.63

BODIES/STUB END TURNBUCKLES

Size (in) Diameter (A) x Take-Up (B)	Working Load Limit (lb)	Dimensions (in.)				Approx. Weight each Body only (lb)	Approx. Weight each Stub end (lb)
		C	D	E	F*		
3/8 x 6	1,200	7.13	.56	4.44	16	.3	.7
1/2 x 6	2,200	7.50	.75	4.25	16	.6	1.4
1/2 x 9	2,200	10.50	.75	4.25	19	.8	1.7
1/2 x 12	2,200	13.50	.75	4.25	22	1.0	1.8
5/8 x 6	3,500	7.88	.94	4.06	16	1.0	2.0
5/8 x 9	3,500	10.88	.94	4.06	19	1.2	2.5
5/8 x 12	3,500	13.88	.94	4.06	22	1.4	3.1
3/4 x 6	5,200	8.25	1.13	4.38	17	1.2	3.3
3/4 x 9	5,200	11.25	1.13	4.38	20	1.6	4.0
3/4 x 12	5,200	14.25	1.13	4.38	23	2.1	4.8








BODY ONLY

* Closed position.

SNATCH BLOCKS

Snatch blocks are one of the most widely used general purpose blocks available. Over 235 models of Johnson single and double sheave snatch blocks are available. Johnson snatch blocks have a convenient side opening feature making it easy to thread the block without removing any fittings from the end of the wire rope. Stren-Flex® also offers a full line of mobile crane blocks, overhaul balls, swivels, hooks, and sheaves.

Sheave Snatch Block Specifications

	Working Load Limit (tons)	Wire Rope Size (in.)	Block w/ Swivel Hook			Block w/ Swivel Shackle			
			Part #	Weight (lb)	Sheave O.D. (in.)	Part #	Weight (lb)	Sheave O.D. (in.)	
 <p>◀ Single Sheave w/ Hook</p>	2	5/16 - 3/8	SB02S03BH	6	3	SB02S03BS	6	3	
	4	3/8 - 1/2	SB04S04BH	15	4	SB04S04BS	15	4	
	4	3/8 - 1/2	SB04S06BH	18	6	SB04S06BS	18	6	
	4	3/8 - 1/2	SB04S08BH	22	8	SB04S08BS	22	8	
	4	3/8 - 1/2	SB04S10BH	34	10	SB04S10BS	34	10	
	4	3/8 - 1/2	SB04S12BH	39	12	SB04S12BS	39	12	
	4	3/8 - 1/2	SB04S14BH	41	14	SB04S14BS	41	14	
	 <p>◀ Single Sheave w/ Shackle</p>	8	5/8 - 3/4	SB08S06BH	29	6	SB08S06BS	29	6
		8	5/8 - 3/4	SB08S08BH	32	8	SB08S08BS	32	8
		8	5/8 - 3/4	SB08S10BH	40	10	SB08S10BS	40	10
		8	5/8 - 3/4	SB08S12BH	46	12	SB08S12BS	46	12
		8	5/8 - 3/4	SB08S14BH	58	14	SB08S14BS	58	14
		12	3/4 - 7/8	SB12S06BH	42	6	SB12S06BS	42	6
		12	3/4 - 7/8	SB12S08BH	53	8	SB12S08BS	53	8
		12	3/4 - 7/8	SB12S10BH	66	10	SB12S10BS	66	10
		12	3/4 - 7/8	SB12S12BH	75	12	SB12S12BS	75	12
		12	3/4 - 7/8	SB12S14BH	92	14	SB12S14BS	92	14
	 <p>◀ Single Sheave w/ Shackle</p>	12	3/4 - 7/8	SB12S16BH	119	16	SB12S16BS	119	16
		22	1 - 1 1/8	SB22S08BH	102	8	SB22S08BS	102	8
		22	1 - 1 1/8	SB22S10BH	125	10	SB22S10BS	125	10
22		1 - 1 1/8	SB22S12BH	131	12	SB22S12BS	131	12	
22		1 - 1 1/8	SB22S14BH	149	14	SB22S14BS	149	14	
22		1 - 1 1/8	SB22S16BH	178	16	SB22S16BS	178	16	
22		1 - 1 1/8	SB22S18BH	214	18	SB22S18BS	214	18	
30		1 1/8 - 1 1/4	SB30S20BH	341	20	SB30S20BS	341	20	
30		1 1/8 - 1 1/4	SB30S24BH	461	24	SB30S24BS	461	24	
 <p>◀ Two Sheave w/ Hook</p>		8	3/8 - 1/2	DB08D04BH	26	4	DB08D04BS	26	4
	8	3/8 - 1/2	DB08D06BH	34	6	DB08D06BS	34	6	
	12	5/8 - 3/4	DB12D06BH	50	6	DB12D06BS	50	6	
	12	5/8 - 3/4	DB12D08BH	54	8	DB12D08BS	54	8	
	12	5/8 - 3/4	DB12D10BH	61	10	DB12D10BS	61	10	
	12	5/8 - 3/4	DB12D12BH	81	12	DB12D12BS	81	12	
	12	5/8 - 3/4	DB12D14BH	104	14	DB12D14BS	104	14	
	 <p>◀ Two Sheave w/ Shackle</p>	15	3/4 - 7/8	DB15D06BH	61	6	DB15D06BS	61	6
		15	3/4 - 7/8	DB15D08BH	82	8	DB15D08BS	82	8
		15	3/4 - 7/8	DB15D10BH	94	10	DB15D10BS	94	10
		15	3/4 - 7/8	DB15D12BH	123	12	DB15D12BS	123	12
		15	3/4 - 7/8	DB15D14BH	150	14	DB15D14BS	150	14
		22	1 - 1 1/8	DB22D08BH	132	8	DB22D08BS	132	8
		22	1 - 1 1/8	DB22D10BH	171	10	DB22D10BS	171	10
		22	1 - 1 1/8	DB22D12BH	173	12	DB22D12BS	173	12
		22	1 - 1 1/8	DB22D14BH	201	14	DB22D14BS	201	14

CARBON CHAIN G43, G70



Grade 43 High Test Chain*

A higher strength carbon steel chain, Grade 43 high test chain provides an increased strength to weight ratio in comparison to Grade 30 chain. Grade 43 chain is often used in applications involving logging, construction, load binding and load securement.

Standard per foot (available in chain pails and drums)				
Chain Size (in.)	Working Load Limit (lb)	Domestic Part #	Standard Drum (ft)	Max. Weight per 100 ft. (lb)
1/4	2,600	678141FT	800	60
5/16	3,900	678142FT	550	98
3/8	5,400	678143FT	400	133
7/16	7,200	678144FT	300	204
1/2	9,200	678145FT	200	227
5/8	13,000	678146FT	150	357
3/4	20,200	678147FT	100	606
7/8	24,500	678148FT	80	776
1	34,100	678149FT	60	904

Grade 70 Transport or Binding Chain*

Load ratings for Grade 70 chain averages 20% higher than Grade 43 chain, so a smaller size chain can be used for many jobs. Advantages include less weight, easier handling and more convenient storage. Higher strength makes Grade 70 ideal for truckers, loggers and highway crews for applications involving towing, hauling, lashing and trawling.



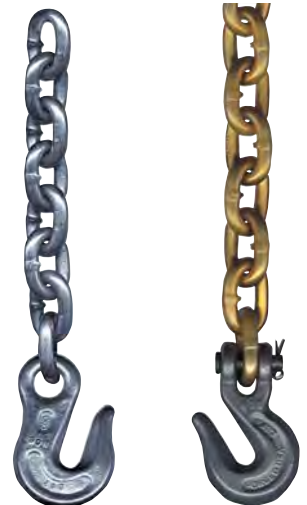
Standard per foot (available in chain pails and drums)				
Chain Size (in.)	Working Load Limit (lb)	Domestic Part #	Standard Drum (ft)	Max. Weight per 100 ft. (lb)
1/4	3,150	678531FT	800	71
5/16	4,700	678532FT	550	100
3/8	6,600	678533FT	400	156
7/16	8,750	678534FT	300	204
1/2	11,300	678535FT	200	259

Grade 43 & Grade 70 Binder Chain Assemblies

Stren-Flex® Grade 43 & 70 binder assemblies are used by truckers, contractors, farmers and anyone dragging, binding or securing an object or objects. Binder chain assemblies can be made by welded or mechanical connections, in any length desired. Standard sizes are shown below.

Size (in. x ft.)	Grade 43			Grade 70		
	Working Load Limit (lb)	Part # (Mechanical w/ clevis hook)	Part # (Welded w/ eye grab hooks)	Working Load Limit (lb)	Part # (Mechanical w/ clevis hook)	Part # (Welded w/ eye grab hooks)
5/16 x 20	3,900	BC052043C	BC052043W	4,700	BC052070C	BC052070W
3/8 x 20	5,400	BC062043C	BC062043W	6,600	BC062070C	BC062070W
1/2 x 20	9,200	BC082043C	BC082043W	11,300	BC082070C	BC082070W

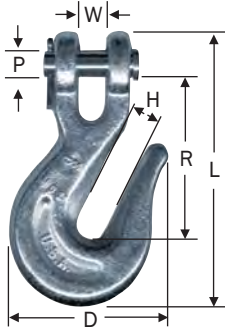
* Grade 43 and 70 chain is not to be used for overhead lifting.



GRADE 43

GRADE 70

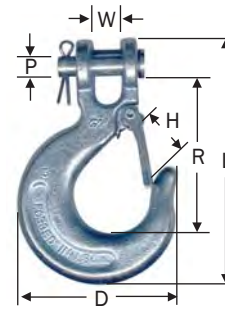
CARBON CHAIN ATTACHMENTS: G43, G70



Grade 43 Clevis Grab Hook (Zinc)

- Heat treated pins
- Hooks are heat treated and tempered
- Designs' ultimate strength equals 3 times working load limit, matching NACM specifications
- Hook embossed with trace code providing traceability through manufacturing and testing process to heat of steel
- Not to be used for overhead lifting

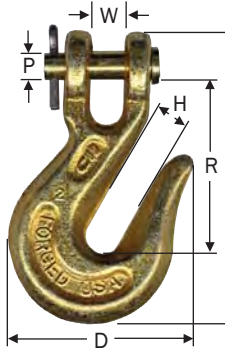
Size (in.)	Working Load Limit (lb)	Domestic Part #	Dimensions (in.)						Weight (lb)
			W	D	H	L	R	P	
1/4	2,600	61193	0.36	2.05	0.36	3.00	1.57	0.31	0.37
5/16	3,900	61293	0.42	2.41	0.44	3.56	1.98	0.38	0.63
3/8	5,400	61393	0.50	2.94	0.52	4.20	2.23	0.44	1.10
7/16	7,200	61493	0.58	3.25	0.60	4.94	2.94	0.50	1.60
1/2	9,200	61593	0.66	3.70	0.67	5.20	2.93	0.55	2.42



Grade 43 Clevis Slip Hook (Zinc)

- Heat treated pins
- Hooks are heat treated and tempered
- Designs' ultimate strength equals 3 times working load limit, matching NACM specifications
- Hook embossed with trace code providing traceability through manufacturing and testing process to heat of steel
- Not to be used for overhead lifting

Size (in.)	Working Load Limit (lb)	Domestic Part #	Dimensions (in.)						Weight (lb)
			W	D	H	L	R	P	
1/4	2,600	66173	0.36	2.33	0.72	2.27	2.32	0.31	0.35
5/16	3,900	66273	0.42	2.72	0.77	4.13	2.56	0.38	0.63
3/8	5,400	66373	0.50	0.86	0.86	4.81	3.04	0.44	1.02
7/16	7,200	66473	0.58	1.02	1.02	5.56	3.50	0.50	1.56
1/2	9,200	66573	0.61	1.12	1.12	6.31	4.15	0.55	2.27



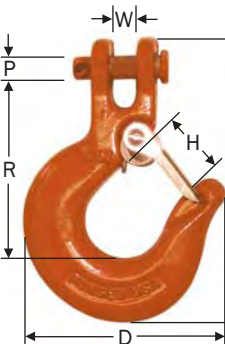
Grade 70 Clevis Grab Hook

- Meets ASTM & NACM standards
- Designed specifically for transport grade 70 chain
- 4:1 design factor
- Yellow chromate finish
- Not recommended for overhead lifting

Size (in.)	Working Load Limit (lb)	Domestic Part #	Dimensions (in.)						Weight (lb)
			W	D	H	L	R	P	
5/16	4,700	62273	0.42	2.48	0.45	3.53	1.99	0.38	0.75
3/8	6,600	62373	0.50	2.95	0.51	4.10	2.35	0.44	1.10

Grade 70 Clevis Slip Hook

- Meets ASTM & NACM standards
- Designed specifically for transport grade 70 chain
- 4:1 design factor
- Hook embossed with trace code providing traceability throughout the manufacturing and testing process to heat of steel



Size (in.)	Working Load Limit (lb)	Domestic Part #	Dimensions (in.)						Weight (lb)
			W	D	H	L	R	P	
With Latch									
5/16	4,700	6905AWL	0.38	3.25	0.94	4.62	2.91	0.39	0.96
3/8	6,600	6906AWL	0.45	3.87	1.00	5.42	3.39	0.49	1.66
Without Latch									
5/16	4,700	M6905A	0.38	3.25	1.06	4.62	2.91	0.39	0.75
3/8	6,600	M6906A	0.45	3.87	1.24	5.42	3.39	0.49	1.25

LOAD BINDERS

Lever Type Load Binder

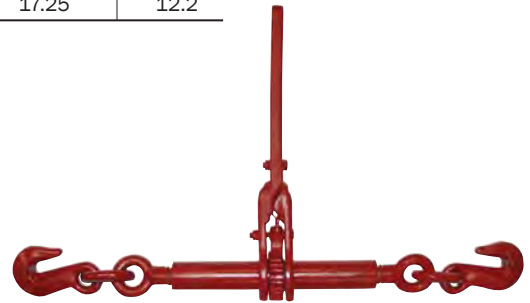
- All components are forged, no cast parts
- Forged binders are lighter and stronger than cast binders
- Under equal force a forged handle will yield and bend while a cast handle may break



	Size (in.)		Part #	Working Load Limit (lb)	Handle Take Up (in.)	Handle Length (in.)	Weight (lb)
	G43	G70					
CM	1/4	-	48304	2,600	3.75	11.25	3.0
	3/8	5/16	48305	5,400	4.50	16.12	8.1
	1/2	3/8	48406	9,200	4.75	16.62	10.6
	3/8	3/8	48769	7,100	4.50	16.62	8.1
Durabilt	1/4	3/16	DB-1	2,600	3.75	11.75	4
	3/8	5/16	DB-2	5,400	4.50	16.00	8.8
	1/2	3/8	DB-3	9,200	4.50	18.00	13
Import**	3/8	5/16	IMLB05-06	5,400	3.70	15.50	8.4
	1/2	3/8	IMLB06-08	9,200	4.30	17.25	12.2

Ratchet Type Load Binder

- Each ratchet component is forged from pure alloy steel
- Handle is designed loose using self-locking one-way bolt allowing easy removal of unwanted debris such as mud, snow or ice
- Proof tested to 50% of the minimum breaking strength
- Gears are permanently welded to the barrel



	Size (in.)		Part #	End Fittings	Working Load Limit (lb)	Take Up (in.)	Handle Length (in.)	Weight (lb)
	G43	G70						
CM	3/8	5/16	48365	Hook/Hook	5,400	8.00	14.00	12
	1/2	3/8	48366	Hook/Hook	9,200	8.00	14.00	13
	5/8	1/2	48367	Hook/Hook	13,000	8.00	14.00	16
Durabilt	3/8	5/16	DR-1	Hook/Hook	6,600	8.00	15.50	12
	1/2	3/8	DR-2	Hook/Hook	9,200	8.00	15.50	14
	5/8	1/2	DR-3	Hook/Hook	13,000	8.00	15.50	15
Import**	3/8	5/16	IMRB05-06	Hook/Hook	5,400	8.00	15.00	10.5
	1/2	3/8	IMRB06-08	Hook/Hook	9,200	8.00	15.00	11.7

Removable Handle Load Binder

- Removing handle provides greater load security by making it less likely for the load or the load binder to be stolen
- Reduces overall weight and cost as only one handle is needed

	Size (in.)		Part #	Type	Working Load Limit (lb)	Handle Take Up (in.)	Handle Length (in.)	Weight (lb)
	G43	G70						
CM	3/8	5/16	48565	Body	5,400	8.00	-	7.4
	1/2	3/8	46566	Body	9,200	8.00	-	11.7
	-	-	46565H	Handle	-	-	14	4.3
Durabilt	3/8	5/16	DR-1-B	Body	6,600	8.00	-	8
	1/2	3/8	DR-X15-B	Body	15,000*	8.00	-	10
	-	-	DR-RH	Handle	-	-	17.25	3



* Ultimate load is 3.5 times WLL in lieu of 4.

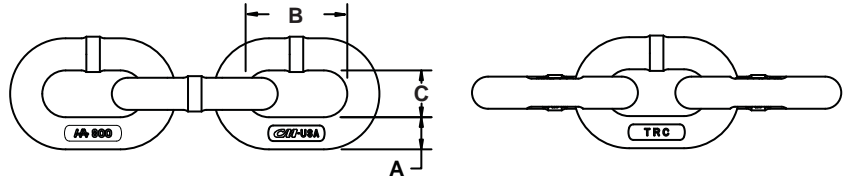
** Import models specifications and dimensions may vary.

ALLOY CHAIN: G80, G100



Grade 80: CM Herc-Alloy 800 Chain

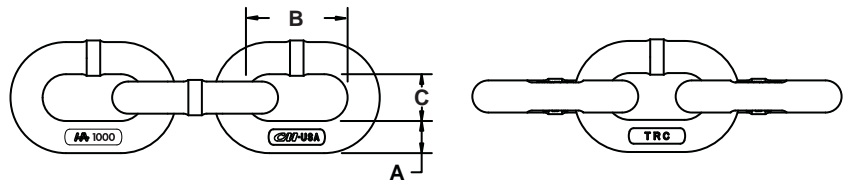
- Meets or exceeds many national and international standards
- Certification included in every drum
- 100% Proof Tested
- Suitable for overhead lifting



Chain Size (in.)	Working Load Limit (lb)	Part #	Nominal Chain Dimensions (in.)			Chain Weight (lb/ft)	Approx. No. of Links (per ft)	Standard Drum (ft)	Drum Weight (lb)
			Material Dia. A	Inside Length B	Inside Width C				
7/32	2,100	607020	0.218	0.676	0.312	0.44	17.8	800	354
9/32	3,500	607028	0.281	0.883	0.395	0.73	13.6	500	365
5/16	4,500	607031	0.315	1.019	0.455	0.91	11.8	n/a	n/a
3/8	7,100	607037	0.394	1.247	0.574	1.44	9.6	500	719
1/2	12,000	607050	0.512	1.440	0.734	2.55	8.3	300	765
5/8	18,100	607062	0.630	1.777	0.855	3.82	6.8	200	765
3/4	28,300	607075	0.787	2.234	1.070	5.95	5.4	100	596
7/8	34,200	607087	0.875	2.250	1.137	7.76	5.3	100	776
1	47,700	607101	1.000	3.070	1.490	9.39	3.9	100	939
1-1/4	72,300	607128	1.260	3.250	1.656	15.71	3.7	90	1,414

Grade 100: CM Herc-Alloy 1000 Chain

- Meets or exceeds many national and international standards
- 25% higher working load limit when compared to Grade 80
- Environmentally friendly gray coating for distinct appearance, ease of identification
- Certification included with every drum
- 100% Proof Tested
- Suitable for overhead lifting



Chain Size (in.)	Working Load Limit (lb)	Part #	Nominal Chain Dimensions (in.)			Chain Weight (lb/ft)	Approx. No. of Links (per ft)	Standard Drum (ft)	Drum Weight (lb)
			Material Dia. A	Inside Length B	Inside Width C				
7/32	2,700	607321	0.218	0.676	0.312	0.44	17.8	800	354
9/32	4,300	607328	0.281	0.883	0.395	0.73	13.6	500	365
3/8	8,800	607339	0.394	1.247	0.574	1.44	9.6	500	720
1/2	15,000	607351	0.512	1.559	0.734	2.46	7.7	300	738
5/8	22,600	607363	0.630	1.916	0.855	3.70	6.3	200	740
3/4	35,300	607378	0.787	2.397	1.070	5.80	5.0	100	577

ALLOY CHAIN SLINGS

How to order chain slings:

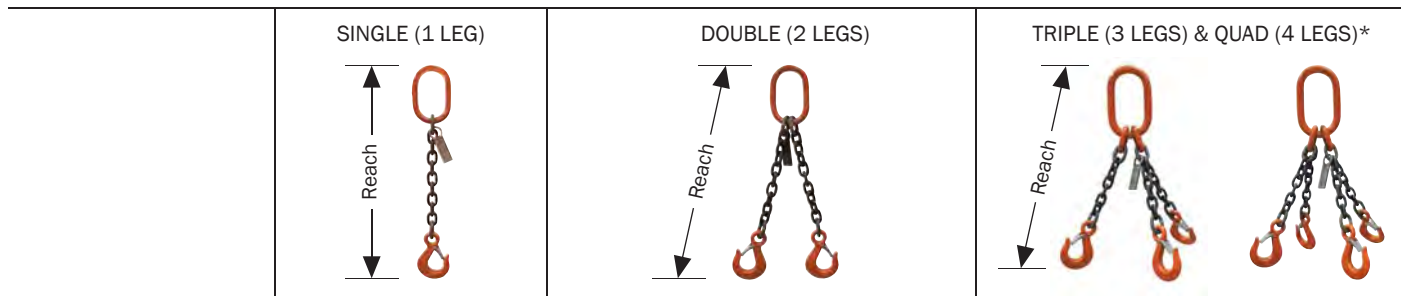
1. Grade 80 or 100 Chain
2. Type of sling
3. Chain size (in.)
4. Reach (Length from bearing point to bearing point)



PART NUMBERING SYSTEM:

D O G A - 10 04

Number of Legs S = Single D = Double T = Triple Q = Quad C = Choker	Master Link O = Oblong	Types of Hooks S = Sling Hook G = Grab Hook F = Foundry Hook L = Lodelok Hook	Style Blank = Standard A = Style A Adjustable B = Style B Adjustable	Size 35 = 7/32" 10 = 5/8" 45 = 9/32" 12 = 3/4" 5 = 5/16" 14 = 7/8" 6 = 3/8" 16 = 1" 8 = 1/2" 20 = 1-1/4"	Reach 3' & up
--	---	--	---	--	-------------------------



	Chain Size (in.)	Working Load Limit for Angles Available (lb)						
		90°	60°	45°	30°	60°	45°	30°
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	28,300	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	108,400	
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
	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

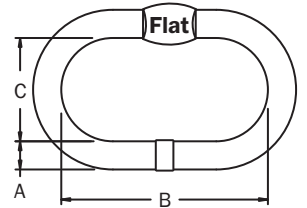
* Quad leg slings do not typically sustain the load evenly on each of its four legs. Therefore, the maximum working load limits are set the same as triple leg slings.

ALLOY CHAIN ATTACHMENTS: G80

Master Link with Flats

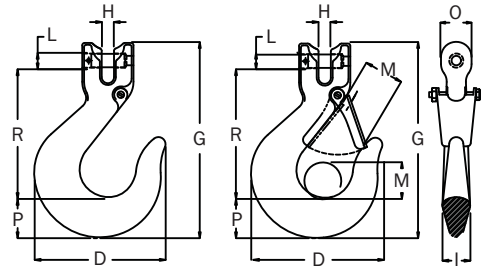
- Designed to accept HA 800 Chain, Wire Rope and Synthetic Webbing
- Use with mechanical and welded chain assemblies
- Sizes up to 1-1/4" available with flats to accommodate Omega link
- 100% proof tested
- Extra wide body for Wire Rope applications

Size (in.)	Working Load Limit (lb)	Part #	Nominal Dim. (in.)			Weight (lb)	Type & Size of Chain Sling	
			Material Dia. A	Inside Length B	Inside Width C		Single (in.)	Double (in.)
7/16	4,200	ML040	0.437	4.130	2.294	0.50	7/32 & 9/32	-
1/2	5,750	ML050	0.512	4.838	2.688	0.80	-	7/32
5/8	9,000	ML063	0.625	5.292	2.977	1.34	3/8	9/32
3/4	14,200	ML075	0.750	6.611	3.719	2.36	1/2	3/8
7/8	17,300	ML087	0.875	7.350	4.135	3.60	-	-
1	26,500	ML100	1.000	7.526	4.301	5.20	5/8	1/2
1-1/4	37,400	ML125	1.250	9.261	5.292	9.60	3/4 & 7/8	5/8
1-1/2	53,000	ML150	1.500	11.025	6.300	16.20	1	3/4
1-3/4	72,150	ML175	1.750	12.863	7.350	25.10	-	7/8
2	94,200	ML200	2.000	14.700	8.400	38.40	1-1/4	1
2-1/4	119,200	ML225	2.250	16.538	9.450	54.60	-	-
2-1/2	147,150	ML250	2.500	18.375	10.500	74.90	-	1-1/4



Clevlok Sling Hook

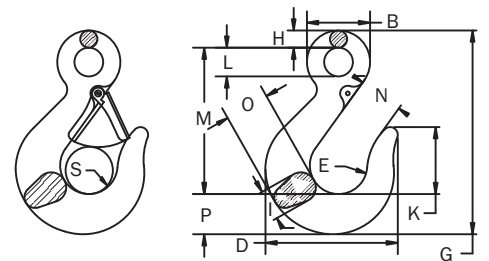
- Available with and without a latch
- Quench and tempered alloy steel
- CM's clevlok head design
- 100% proof tested
- Fatigue rated
- Replacement pin and latch kit available



Size (in.)	Working Load Limit (lb)	Hook Part #	Latch Kit Part #	Dimensions (in.)									Weight w/o latch (lb)
				D	G	H	I	L	M	O	P	R	
9/32	3,500	658338	595523	3.50	5.16	0.33	0.73	0.36	1.19	0.81	1.21	3.44	1.20
3/8	7,100	658339	595525	4.34	6.67	0.45	0.95	0.51	1.47	1.09	1.45	4.53	2.30
1/2	12,000	658340	595528	5.50	8.00	0.59	1.17	0.63	1.78	1.28	1.75	5.27	4.33
5/8	18,100	658341	595529	6.28	9.69	0.75	1.44	0.75	2.03	1.44	2.19	6.08	8.10
3/4	28,300	658342	595530	7.83	11.69	0.88	1.69	0.91	2.50	1.75	2.56	7.34	12.70

Eye Sling Hook

- Available with and without a latch
- Quench and tempered alloy steel
- 100% proof tested
- Fatigue rated
- Replacement latch kit available

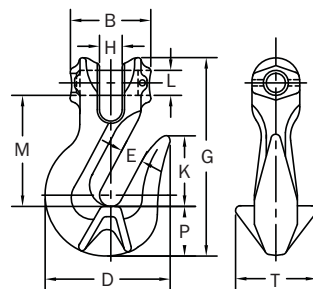


Size (in.)	Working Load Limit (lb)	Hook Part #	Latch Kit Part #	Dimensions (in.)												Weight w/o latch (lb)	
				B	D	E	G	H	I	K	L	M	N	O	P		S
7/32	2,100	458544	595461	-	3.31	1.44	4.30	0.38	0.78	1.25	0.75	3.06	1.25	1.00	0.86	1.11	0.66
9/32	3,500	458722	595523	1.63	3.50	1.50	5.25	0.44	0.73	1.59	0.75	3.75	1.19	1.20	1.05	1.06	1.10
3/8	7,100	458725	595525	2.06	4.33	1.88	6.64	0.56	0.95	2.19	0.94	4.78	1.44	1.45	1.28	1.31	1.90
1/2	12,000	458728	595528	2.63	5.50	2.25	8.16	0.75	1.17	2.56	1.13	5.69	1.78	1.94	1.66	1.63	4.30
5/8	18,100	458729	595529	3.06	6.34	2.63	9.66	0.88	1.44	2.63	1.31	6.50	2.03	2.38	2.19	1.75	7.30
3/4	28,300	458730	595530	3.50	7.83	3.00	11.38	1.00	1.69	3.44	1.50	7.81	2.50	2.83	2.51	2.19	12.50
7/8	34,200	458732	595532	3.88	8.59	3.38	12.72	1.09	1.94	3.88	1.69	8.75	2.78	3.22	2.84	2.38	18.10
1	47,700	458733	595533	4.31	9.59	4.00	14.23	1.22	2.14	4.25	1.88	9.88	3.13	3.55	3.09	2.88	22.60
1-1/4	72,300	458735	595535	5.31	11.56	4.66	17.00	1.50	2.62	4.64	2.31	11.50	3.88	4.25	3.89	3.41	47.00

ALLOY CHAIN ATTACHMENTS: G80

Clevlok Cradle Grab Hook

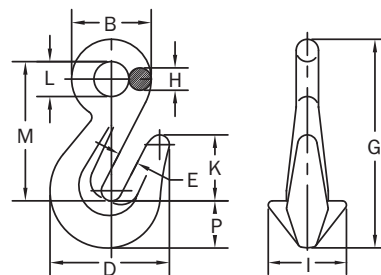
- CM's unique cradle grab design
- Quench and tempered alloy steel
- Fatigue rated
- Replacement pin available



Size (in.)	Working Load Limit (lb)	Part #	Dimensions (in.)										Weight (lb)
			B	D	E	G	H	K	L	M	P	T	
9/32	3,500	659222	1.31	1.78	.359	3.00	0.33	0.98	0.36	1.63	0.72	1.19	0.44
3/8	7,100	659225	1.81	2.56	.469	4.08	0.45	1.41	0.51	2.11	1.06	1.75	1.18
1/2	12,000	659228	2.16	3.25	.594	5.27	0.59	1.88	0.63	2.88	1.28	2.13	2.70
5/8	18,100	659229	2.69	4.08	.750	6.53	0.75	2.38	0.75	3.56	1.59	2.50	4.60
3/4	28,300	659430	3.09	4.91	.875	7.88	0.88	2.84	0.91	4.25	1.88	3.13	10.24

Eye Cradle Grab Hook

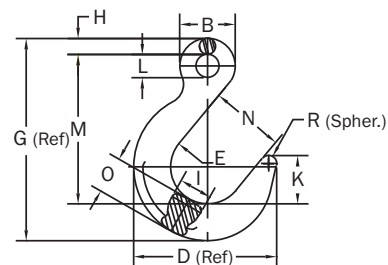
- CM's unique cradle grab design
- Quench and tempered alloy steel
- 100% proof tested
- Fatigue rated



Size (in.)	Working Load Limit (lb)	Part #	Dimensions (in.)										Weight (lb)
			B	D	E	G	H	I	K	L	M	P	
7/32	2,100	559318	1.19	1.75	0.36	2.69	0.38	1.19	0.96	0.63	1.63	0.7	0.35
9/32	3,500	559325	1.38	1.91	0.36	3.70	0.38	1.06	1.04	0.63	2.57	0.76	0.55
3/8	7,100	559337	1.78	2.78	0.47	4.81	0.50	1.38	1.49	0.78	3.28	1.04	1.06
1/2	12,000	559350	2.28	3.63	0.59	6.19	0.63	1.81	1.98	1.03	4.22	1.51	2.00
5/8	18,100	559362	2.75	4.41	0.75	7.62	0.75	2.13	2.39	1.25	5.06	1.80	5.40
3/4	28,300	559575	3.19	5.23	0.88	8.99	0.88	2.88	3.50	1.44	6.25	1.88	9.00
7/8	34,200	559387	3.75	5.69	1.00	9.63	1.00	3.00	3.75	1.75	6.50	2.12	10.40
1	47,700	559100	4.31	7.00	1.19	12.44	1.22	3.88	4.31	1.88	8.09	3.12	20.90
1-1/4	72,300	559124	5.38	8.25	1.50	15.56	1.56	2.50	5.50	2.25	10.50	3.50	40.00

Eye Foundry Hook

- Throat opening up to 6"
- Quench and tempered alloy steel
- Fatigue rated to Grade 80 specifications

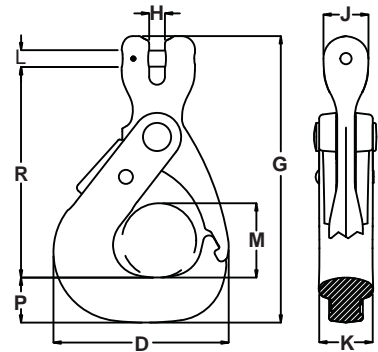


Size (in.)	Working Load Limit (lb)	Part #	Dimensions (in.)											Weight (lb)	
			B	D	E	G	H	I	K	L	M	N	O		R
9/32	3,500	474498	1.56	4.75	2.50	6.45	0.47	1.00	1.56	0.63	4.75	2.50	1.23	0.25	2.4
3/8	7,100	474499	2.00	5.75	3.00	7.88	0.63	1.27	1.88	0.75	5.75	3.00	1.50	0.31	4.5
1/2	12,000	474500	2.50	6.75	3.50	9.38	0.75	1.50	2.22	1.00	6.88	3.50	1.75	0.38	7.1
5/8	18,100	474501	3.00	7.81	4.00	10.97	0.88	1.81	2.63	1.13	8.06	4.00	2.03	0.44	11.6
3/4	28,300	474502	3.50	9.13	4.50	12.81	1.00	2.20	3.00	1.50	9.25	4.50	2.56	0.50	20.0
7/8	34,200	474503	4.00	10.14	5.00	14.23	1.13	2.25	3.38	1.75	10.38	5.00	2.78	0.56	26.0
1	47,700	474504	4.50	11.13	5.50	15.84	1.25	2.59	3.75	2.13	11.56	5.50	3.03	0.62	36.8
1-1/4	72,300	474505	5.13	12.84	6.00	18.03	1.38	3.17	4.25	2.38	12.88	6.00	3.81	0.75	58.4

ALLOY CHAIN ATTACHMENTS: G80

Clevlok Style Lodelok Hook

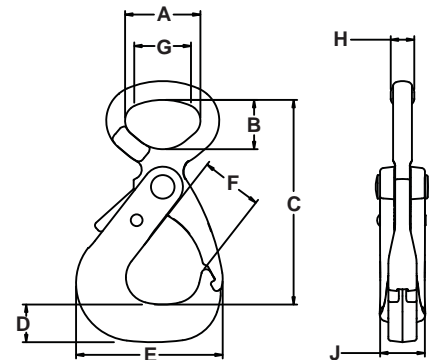
- High cycling, long life spring
- Factory replaceable pins
- "I" beam construction for greater strength
- 100% proof tested
- Fatigue rated to grade 100 specifications



Size (in.)	Working Load Limit (lb)	Product Code	Replace Latch Kit Part #	Dimensions (in.)									Weight (lb)
				D	G	H	J	K	L	M	P	R	
9/32	4,300	616005	656005	3.89	6.37	0.35	1.00	1.19	0.36	1.56	1.00	4.68	2.62
3/8	8,800	616010	656010	5.03	8.20	0.47	1.16	1.25	0.51	2.25	1.25	6.11	4.93
1/2	15,000	616015	656015	6.68	10.07	0.59	1.50	1.63	0.63	2.81	1.75	7.25	9.32
5/8	22,600	616020	656020	8.04	11.62	0.71	1.74	1.88	0.75	3.19	2.00	8.36	14.70

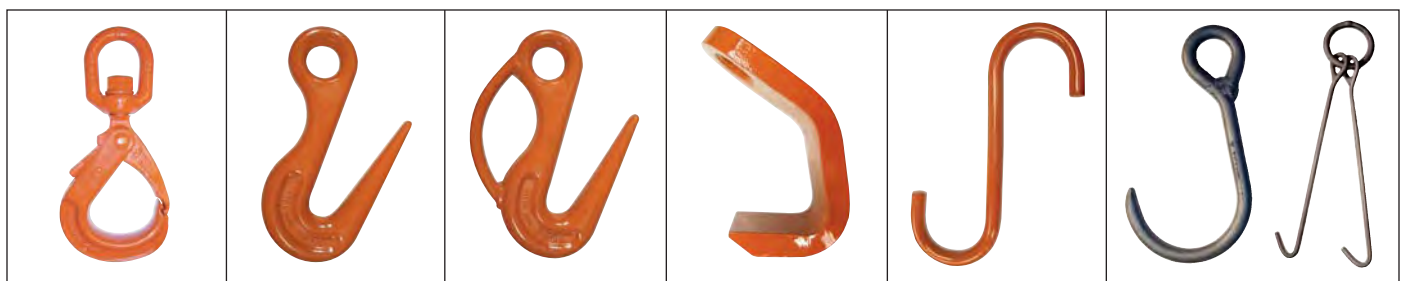
Eye Style Lodelok Hook

- Large eye design for use with chain, wire rope and synthetic material
- Factory replaceable pins
- 100% proof tested
- Fatigue rated to grade 100 specifications
- For welded 7/32" Chain Sling use 9/32" Eye Lodelok Hook



Size (in.)	Working Load Limit (lb)	Product Code	Replace Latch Kit Part #	Dimensions (in.)									Weight (lb)
				A	B	C	D	E	F min	G	H	J	
9/32	4,300	626005	656005	2.00	1.31	5.43	1.00	3.89	1.563	1.47	0.63	1.19	2.64
3/8	8,800	626010	656010	2.50	1.78	7.41	1.25	5.03	2.250	2.00	0.75	1.25	4.86
1/2	15,000	626015	656015	3.44	2.38	9.38	1.75	6.68	2.813	2.59	1.00	1.63	10.46
5/8	22,600	626020	656020	3.94	2.62	10.71	2.00	8.04	3.125	2.92	1.25	1.88	16.52

Other Attachments Available:



Swivel Style Lodelok Hook

Sorting Hook

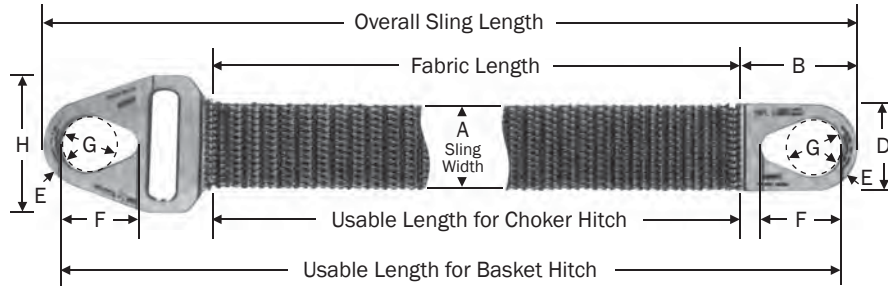
Sorting Hook w/ Handle

Plate Hook

"S" Hook

Specialty Hooks

WIRE MESH SLINGS



Wire Mesh Slings combine the flexibility, choking capabilities and stability of a synthetic sling with the abrasion and heat resistant characteristics of a chain sling. Wire Mesh Slings are available in three gauges of wire thickness and widths ranging from 20" through 2". Whether new or repaired, every sling is stamped with serial number and working capacity and is proof tested and certified. Stren-Flex® fabricates and repairs all sizes of chain mesh slings.

Ordering Specifications for Wire Mesh Slings:

- Gage of wire mesh
- Type of sling – end fittings
- Width of sling – width of wire mesh
- Length of sling

HEAVY DUTY MESH (10 GAGE)

The most popular size of mesh. Tough against abrasion and sharp edges. Grade 35 - 1/2" Thick

Sling Width (in.)	Capacity		
	Vertical	Choker	Vertical Basket
2	1,600	1,600	3,200
3	3,000	3,000	6,000
4	4,400	4,400	8,800
6	6,600	6,600	13,200
8	8,800	8,800	17,600
10	11,000	11,000	22,000
12	13,200	13,200	26,400
14	15,400	15,400	30,800
16	17,600	17,600	35,200
18	19,800	19,800	39,600
20	22,000	22,000	44,000

A Width (Nom.)	Length (in.)								Hook Size (ton)	Approx. Weight of 3' Sling	Fabric lbs/ft of Length		
	B	C	D	E	F	G	H	DD			G-35 10 Gauge	G-43 12 Gauge	G-59 14 Gauge
2	4	6	2	1/2	2-3/4	1-3/4	4	3-3/4	5	5	1.25	1.13	.75
3	5-1/4	7-1/2	3	3/4	3-1/2	2-1/2	5-1/4	5	10	8	1.88	1.75	1.13
4	5-1/2	7-3/4	4	3/4	3-1/2	2-1/2	6-1/4	5	10	10	2.50	2.25	1.50
6	6-1/2	9	6	1	4	2-3/4	8-1/2	6	15	15	3.88	3.38	2.25
8	8-3/4	12	8	1-1/4	5-1/2	4	11-1/4	8-1/2	25	20	5.13	4.50	3.0
10	7-3/4	10-3/4	10-1/4	1	5	3-1/2	12-3/4	7-1/2	25	26	3.38	5.63	3.75
12	8	11-1/4	12-1/4	1	5	3-1/2	14-3/4	7-1/2	30	33	7.63	6.75	4.50
14	8-1/4	12	14-1/4	1-1/4	5	3-1/2	17	7-3/4	30	37	8.88	7.88	5.25
16	8-1/4	12-1/2	16-1/4	1-1/4	5	3-1/2	19	7-3/4	30	44	10.13	9	6
18	8-1/2	13-1/4	18	2	5	4	21-1/4	11	30	51	11.38	10.13	6.75
20	8-1/2	14	20	2	5	4	23-1/4	11-1/4	30	58	12.75	11.25	7.50

NOTE: Accommodates most hooks to listed size. Standard tolerance + or - 1/2".

Type 1 pictured above.

Type 2 is fabricated with a male fitting each end and is used exclusively in a basket hitch.

Wire Mesh Sling Inspection Criteria

Metal mesh slings shall be immediately removed from service if any of the following conditions are present:

- Twist or stretch of either handle.
- A 15% reduction of the original cross sectional area of metal at any point around the handle eye.
- Lack of flexibility caused by damage to the mesh fabric.
- 25% reduction in mesh wire diameter due to abrasion and 15% reduction in mesh wire diameter due to corrosion.
- Broken welds or joints on the body or edge of the sling.
- Any broken wires.

Note: All Stren-Flex® wire mesh slings –whether new or repaired– are tested and certified before delivery to the customer.

OSHA & ASME REFERENCE

Quick Reference Guide

(OSHA 29 CFR 1910.184 & ASME B30.9)

Wire Rope Slings

OSHA 29 CFR 1910.184

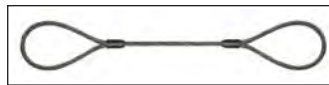
- 1) Do not exceed working load limit (WLL).
- 2) Min. of 10 dia. between sleeves/splices.
- 3) Consult manufacturer for use of fiber core slings in excess of 200°F or steel core slings below -60°F or above 400°F.
- 4) Welded attachments must be proof tested by manufacturer prior to initial use.
- 5) Remove if any of the following is present:
 - Broken wires ≥ 10 /lay, 5 in 1 strand/lay
 - 1/3 wear of outside wires
 - Kinks, crushing, birdcaging, corrosion, distortion of wire rope structure or damaged end fittings
 - Evidence of heat damage
 - Hooks with 15% spread or 10° twist

Alloy Chain Slings

OSHA 29 CFR 1910.184

- 1) Do not exceed working load limit. (WLL)
- 2) Slings shall be permanently marked with size, grade, rated capacity and reach.
- 3) Chain slings shall not be used in excess of the rated capacity of the weakest component.
- 4) Slings shall be thoroughly inspected at intervals no greater than once every 12 months. Records of such inspections must be kept on file.
- 5) Makeshift links or fasteners made from bolts, rods or other materials shall not be used.
- 6) Worn or damaged slings or attachments shall not be used until repaired.
- 7) Mechanical coupling or low carbon steel repair links shall not be used to repair broken lengths of chain.
- 8) Remove if any of the following is present:
 - Heated above 1000°F
 - Cracked or deformed master links, couplings, hooks or other components
 - Hooks are cracked and have been opened more than 15% or twisted more than 10° from plane of unbent hook
 - Chain wear beyond tolerance

NOTES: Legal standard pertaining to slings, wire ropes, and below the hook devices are specifically and literally enforced by OSHA when the standard has a penalty attached. On most occasions the law uses the word “shall” in the reference. Sometimes the word “should” is used in the place of “shall”. The word “shall” requires compliance with the action or inaction required. The word “should” only recommends compliance. The difference is that absent some gross negligence or other aggravating circumstance, someone would not be punished under the law for failing to do some action suggested by the word “should”. Failure to perform an action directed by the word “shall” does give rise to the definite possibility of a legal penalty, and is a violation of the law.



ASME B30.9

- 1) Eye shall not be formed using knots.
- 2) Use wire rope clips only in temporary situation where prefabrication is not possible.
- 3) Each sling shall be visually inspected by handler before each use.
- 4) Remove if any of the following is present:
 - Broken wires for multi-part slings:
 - Less than 8-part and Cable Laid ≥ 20 /lay, 20/braid/lay, 1 strand/sling
 - 8-part or more ≥ 40 /lay, 40/braid/lay, 1 strand/sling
 - Core damage, severe abrasion



ASME B30.9

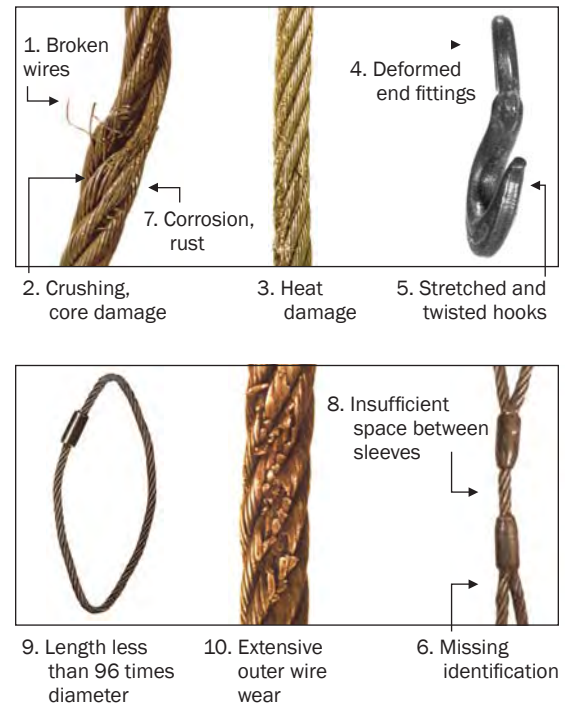
- 1) These regulations apply only to slings made from Grade 80 or higher alloy chain manufactured and tested in accordance with National Association of Chain Mfrs.
- 2) Prior to use, welded components of new slings shall be proof tested to (2xWLL).
- 3) Repaired slings shall be permanently marked with name of repairing agency.
- 4) Latches on hooks should seat properly, rotate freely, and show no permanent distortion.
- 5) Slings should be long enough so that the working load limit is adequate when the angle of the legs is taken into consideration.
- 6) Check chain and attachments for wear, nicks, cracks, breaks, gouges, stretch, bends, weld splatter, discoloration from excessive temperature, and stretched throat openings on hooks.

INSPECTION REFERENCE

Wire Rope Sling Removal Criteria

Wire rope, and wire rope slings should be removed from service upon observation of any of the following conditions:

- 1) Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand of one rope lay.
- 2) Kinking, crushing, birdcaging, core damage or any other damage resulting in distortion of the wire rope structure.
- 3) Evidence of heat damage.
- 4) Cracked, deformed, or worn end attachments.
- 5) Hooks that have been opened more than 15% of the normal throat opening measured at the narrowest point or twisted more than 10° from the plane of an unbent hook.
- 6) Missing or illegible sling identification.
- 7) Corrosion of rope or end attachments.
- 8) Eye/Eye slings: Min. of 10 times the rope diameter between sleeves.
- 9) Grommet slings: Min. of 96 times the rope diameter.
- 10) Extensive wear (greater than 1/3 of outside wires).

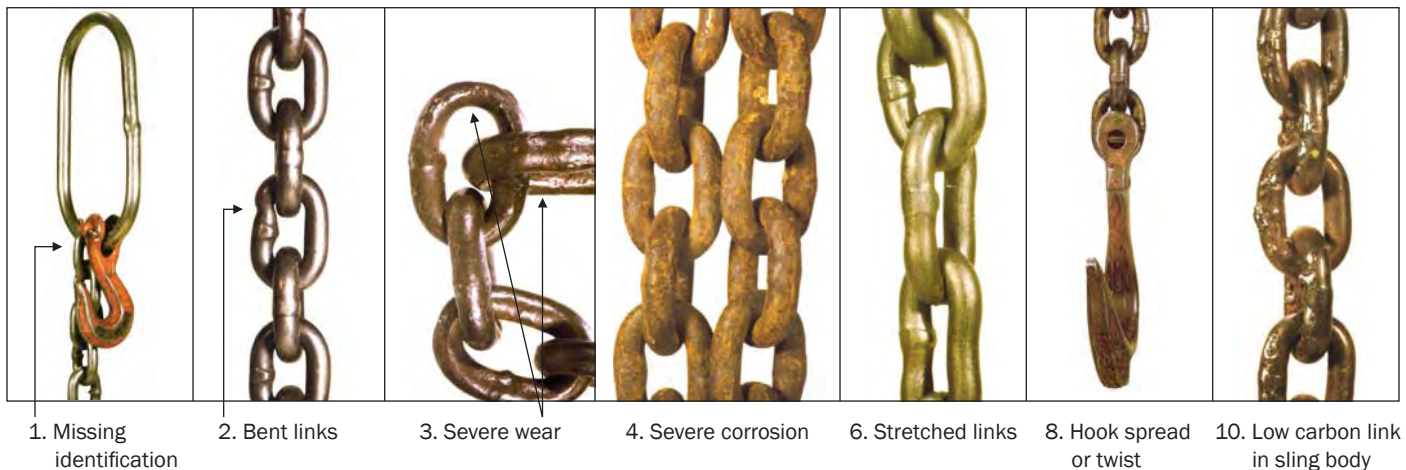


Alloy Chain Slings Removal Criteria

- 1) Missing or illegible sling identification.
- 2) Bent, twisted, cracked, stretched or otherwise deformed components.
- 3) Components with severe wear, nicks or gouges.
- 4) Severe corrosion or pitting.
- 5) Improperly functioning mechanical components.
- 6) Stretched or bent links.
- 7) Broken or non-functional latches (if present.)
- 8) Hook spread or twist.
- 9) Makeshift links or fasteners.
- 10) Broken chain repaired with low carbon links.
- 11) Heat damage, weld spatter (See table)

EFFECT OF HEAT ON CHAIN

Temperature (°F)	Reduction in WLL During Exposure	Permanent Reduction in WLL after Exposure
-40 - 400	None	None
400 - 500	5%	None
500 - 600	10%	None
600 - 700	20%	None
700 - 800	25%	10%
800 - 900	35%	25%
900 - 1000	40%	30%
>1000	Remove from service	





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