

WEB SLING HARDWARE

**Steel *Unilink* Web Sling Hardware
Combination Triangle and Choker Fitting
U. S. Patent No. 4789193**

This forged, high carbon steel fitting, functions as both a triangle and choker.

Features, Advantages and Benefits

Promotes Safety

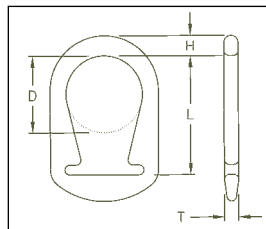
- Forged steel for strength and reliability
- Smooth rounded profile helps protect sling, worker and load

Saves Money

- May be rewebbed to reduce cost
- Zinc dichromate plated for longer life
- *Unilinks* cost less than triangle/choker combinations

Saves Time

- Large Crane hook opening - speeds rigging
- Positive *Web-Trap* capture - no need to stop and reposition web
- Functions both as a triangle and a choker - choke with either end



Unilink Codes And Specifications

Web Width (in.)	Part No.	Dimensions (in.)				Weight (lbs.)
		L	D	H	Thick	
2	SU2	3 11/16	2	11/16	9/16	1.1
3	SU3	5 1/16	3	7/8	5/8	2.4
4	SU4	6 3/16	4	1	3/4	4.0

Avoid contact of hardware with load edges.
Unilink has the same rated capacities as TT or TC slings.

Forged Aluminum Triangles and Chokers

⚠ WARNING

Read Definition on page 3

Aluminum is severely degraded by alkali, caustic environments, acids and salt water.

Aluminum Triangles and Chokers are available but may only be used with single ply web slings within the rated capacities shown in the table. They should not be used with *Dura-Web* 2000 webbing.

Forged from aircraft aluminum, this tough alloy is stronger than mild steel. Aluminum has the advantages of being lightweight, non-sparking and does not rust.

Note: Aluminum triangles and chokers DO NOT offer the advantages of the *Web-Trap* feature. Aluminum fittings are not as durable and cost more than steel.

WEB SLING HARDWARE

Web-Trap Steel Sling Hardware - Triangles and Chokers

A significant improvement in triangle and choker design - featuring positive web capture. Webbing can slip to the side of ordinary fittings, not with *Web-Trap*. These fittings feature alloy steel for lighter sling weight and a zinc dichromate plating to inhibit rust.



Webbing can slip with ordinary fittings.

Web-Trap prevents side shift.

Alloy Steel - For One Or Two Ply Slings

Web-Trap Triangles							Web-Trap Chokers						
Web Width	Part No.	Dimensions (in.)				Weight (lbs.)	Part No.	Dimensions (in.)					Weight (lbs.)
		L	D	T	H			L	A	D	T	H	
*2"	ST-2	2 3/8	1 3/4	1/2	5/8	1.0	SC-2	5	2 3/8	1 3/4	1/2	5/8	1.9
*3"	ST-3	3 7/16	2	1/2	3/4	1.9	SC-3	6 1/4	3 3/8	2	1/2	3/4	3.6
*4"	ST-4	4 1/8	2 3/8	1/2	13/16	2.8	SC-4	7	4	2 3/8	1/2	13/16	5.1
6"	ST-6	5 1/2	3 1/8	3/4	1 1/16	6.6	SC-6	9 1/2	5 1/2	3 1/8	3/4	1 1/16	12

Alloy Steel - For One Ply Slings

Web-Trap Triangles							Web-Trap Chokers						
Web Width	Part No.	Dimensions (in.)				Weight (lbs.)	Part No.	Dimensions (in.)					Weight (lbs.)
		L	D	T	H			L	A	D	T	H	
8"	ST1-8	7 3/4	4	1/2	1 1/4	8	SC1-8	11 1/4	7 1/2	4	1/2	1 7/16	16
10"	ST1-10	8 1/2	5	3/4	1 7/16	16	SC1-10	12 7/8	8 1/4	5	3/4	1 1/2	28
12"	ST1-12	8 1/2	5 1/2	3/4	1 3/4	20	SC1-12	14 1/2	10	5 1/2	3/4	1 3/4	40

Alloy Steel - For Two Ply Slings

Web-Trap Triangles							Web-Trap Chokers						
Web Width	Part No.	Dimensions (in.)				Weight (lbs.)	Part No.	Dimensions (in.)					Weight (lbs.)
		L	D	T	H			L	A	D	T	H	
8"	ST2-8	7 3/4	4	3/4	1 1/4	12	SC2-8	11 1/4	7 1/2	4	3/4	1 7/16	25
10"	ST2-10	8 1/2	5	1	1 7/16	21	SC2-10	12 7/8	8 1/4	5	1	1 1/2	38
12"	ST2-12	8 1/2	5 1/2	1	1 3/4	27	SC2-12	14 1/2	10	5 1/2	1	1 3/4	54

* *Unlink* is standard fitting - Triangle and chokers available on special order only.

TUFLEX HARDWARE / BRIDLE SLINGS

Features, Benefits and Advantages

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

Promotes Safety

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

Saves Money

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

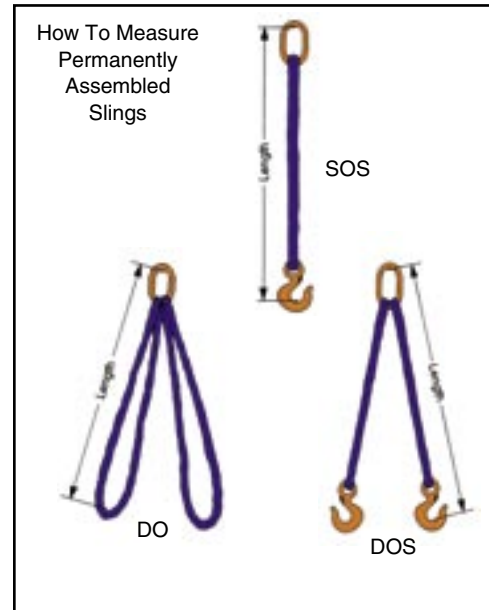
Saves Time

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





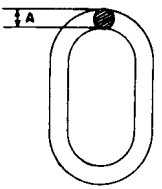
How to Order

Specify:

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



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

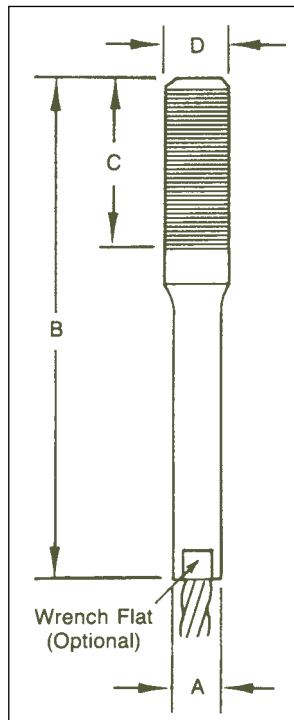
Part No.	Color	Rated Capacity (lbs.)*			Sling Hook **		Oblong Link (in.)		
		 Single @ 90° Vertical	 Double @ 60°	 Quad @ 60°		 Oblong Link Stock Dia. A (in.)			
							Size	E x R x T (in.)	Single
EN30	Purple	2,600	4,500	9,000	2TA	1 1/8 x 4 3/32 x 1 1/16	1/2	1/2	3/4
EN60	Green	5,300	9,100	18,300	4.5TA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

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

SWAGED THREADED STUDS

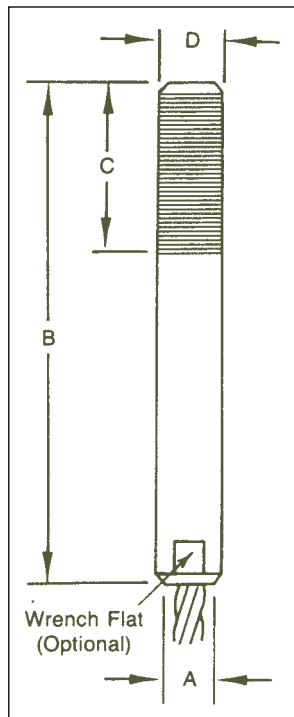
- Choice of studs made of specially selected carbon steel or stainless steel
- Custom OEM engineering available

Straight Threaded Studs



Part No.	Rope Dia (in.)	Nominal Breaking Strength (tons)*	Dimensions (in.)				N.C. Thread #	N.F. Thread #
			A After Swage	B Approx.	C	D		
STS-8	1/4	3.4	7/16	4 1/16	1 1/2	1/2	13	20
STS-10	5/16	5.3	9/16	5 1/4	1 7/8	5/8	11	18
STS-12	3/8	7.6	5/8	6 1/4	2 1/4	3/4	10	16
STS-14	7/16	10.2	3/4	7 5/16	2 5/8	7/8	9	14
STS-16	1/2	13.3	7/8	8 1/4	3	1	8	14
STS-18	9/16	16.8	1	9 1/4	3 3/8	1 1/8	7	12
STS-20	5/8	20.6	1 1/8	10 1/8	3 3/4	1 1/4	7	12
STS-24	3/4	29.4	1 1/4	12 13/16	4 1/2	1 1/2	6	12
STS-28	7/8	39.5	1 1/2	14 9/16	5 1/4	1 3/4	5	12
STS-32	1	51.7	1 3/4	16 1/4	6	2	4 1/2	12
STS-36	1 1/8	65.0	2	18 1/4	6 3/4	2 1/4	4 1/2	12
STS-40	1 1/4	79.9	2 1/4	20 1/4	7 1/2	2 1/2	4	12

Turned Threaded Studs



Part No.	Rope Dia (in.)	Nominal Breaking Strength (tons)*	Dimensions (in.)				N.C. Thread #	N.F. Thread #
			A After Swage	B Approx.	C	D		
TTS-10	5/16	5.3	5/8	5 23/32	1 3/4	5/8	11	18
TTS-12	3/8	7.6	3/4	6 3/4	2	3/4	10	16
TTS-14	7/16	10.2	7/8	7 21/32	2 1/4	7/8	9	14
TTS-16	1/2	13.3	1	8 9/16	2 1/2	1	8	14
TTS-18	9/16	16.8	1 1/8	9 5/8	2 3/4	1 1/8	7	12
TTS-20	5/8	20.6	1 1/4	10 21/32	3 1/8	1 1/4	7	12
TTS-24	3/4	29.4	1 1/2	12 11/16	3 3/4	1 1/2	6	12
TTS-28	7/8	39.5	1 3/4	14 5/8	4 3/8	1 3/4	5	12
TTS-32	1	51.7	2	16 21/32	5	2	4 1/2	12
TTS-36	1 1/8	65.0	2 1/4	18 5/8	5 5/8	2 1/4	4 1/2	12
TTS-40	1 1/4	79.9	2 1/2	20 21/32	6 1/4	2 1/2	4	12
TTS-44	1 3/8	96.0	2 3/4	22 17/32	6 7/8	2 3/4	4	12
TTS-48	1 1/2	114	3	24 1/2	7 1/2	3	4	12

* Nominal Breaking Strength based on 6 x 19 or 6 x 37 IWRC, EIP wire rope, with assembly used as a straight tension member.

SWAGED SOCKET ASSEMBLIES

Features, Advantages and Benefits

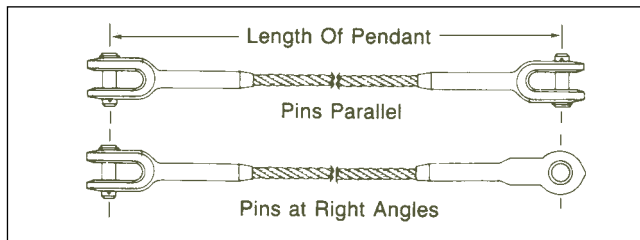
Promotes Safety

- Achieves 100% of nominal rope breaking strength
- All assemblies are proof tested before shipment to customer

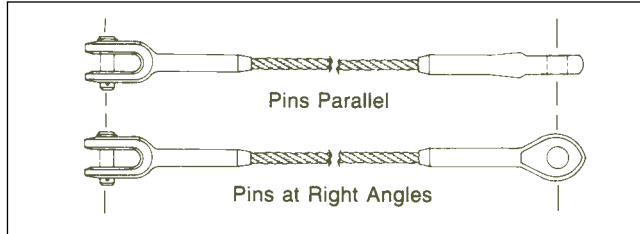
Saves Money



- Custom engineered assemblies are available for specific rigging needs

Open Swaged Sockets



Open and Closed Swaged Sockets

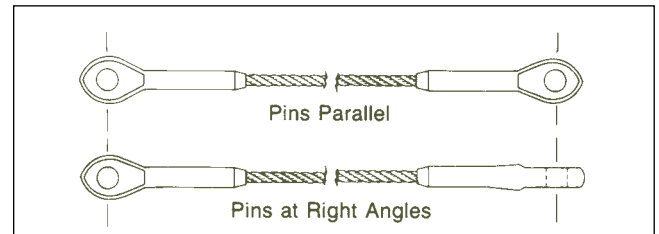


 Rope Diameter (in.)	Minimum Pendant Length	 Vertical Capacity (tons) *
1/4	11"	.68
5/16	1' 3"	1.1
3/8	1' 3"	1.5
7/16	1' 8"	2.0
1/2	1' 8"	2.7
9/16	2' 0"	3.4
5/8	2' 0"	4.1
3/4	2' 5"	5.9
7/8	2' 10"	8.0
1	3' 2"	10
1 1/8	3' 7"	13
1 1/4	4' 0"	16


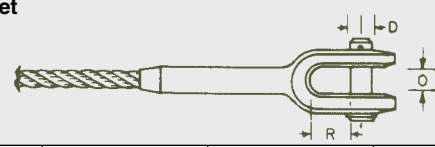
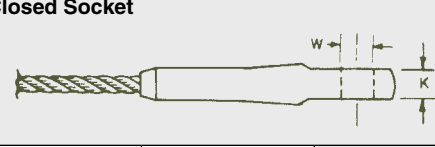
* Values given apply to 6 x 19 or 6 x 37 IWRC, EIP rope when pendants are used for slings. When used as Boom Suspension System or other applications, contact Lift-All for ratings.

Wire Rope

Closed Swaged Sockets



Swage Socket Dimensions (Forged Steel)

 Rope Dia (in.)	Open Socket 				Closed Socket 		
	R (in.)	O (in.)	D (in.)	Weight (lbs.)	W (in.)	K (in.)	Weight (lbs.)
1/4	1 5/32	11/16	11/16	.52	3/4	1/2	.38
5/16	1 11/32	13/16	13/16	1.12	7/8	11/16	.77
3/8	1 11/32	13/16	13/16	1.25	7/8	11/16	.72
7/16	1 1/2	1	1	2.08	1 1/16	7/8	1.42
1/2	1 1/2	1	1	2.08	1 1/16	7/8	1.35
9/16	1 5/8	1 1/4	1 3/16	4.48	1 1/4	1 1/8	2.92
5/8	1 5/8	1 1/4	1 3/16	4.75	1 1/4	1 1/8	2.85
3/4	2	1 1/2	1 3/8	7.97	1 7/16	1 5/16	4.90
7/8	2 3/8	1 3/4	1 5/8	11.30	1 11/16	1 1/2	6.63
1	2 3/4	2	2	17.80	2 1/16	1 3/4	10.30
1 1/8	3 1/8	2 1/4	2 1/4	27.50	2 5/16	2	14.50
1 1/4	3 1/2	2 1/2	2 1/2	35.75	2 9/16	2 1/4	20.75

WINCH LINES, HOIST LINES AND BUTTONS

Winch and Hoist Line Cables

Lift-All winch and hoist lines are made using 6 x 19 Wire Core ropes for better resistance to abrasion and crushing. Available with carbon hooks for large throat openings or alloy hooks for longer life.

Features, Advantages and Benefits

Promotes Safety

- Permaloc flemish eye splice for high strength efficiency
- Quality factory assembly avoids faulty termination

Saves Money

- Economical standard assemblies
- Heavy duty thimble in eye extends useful life

Saves Time

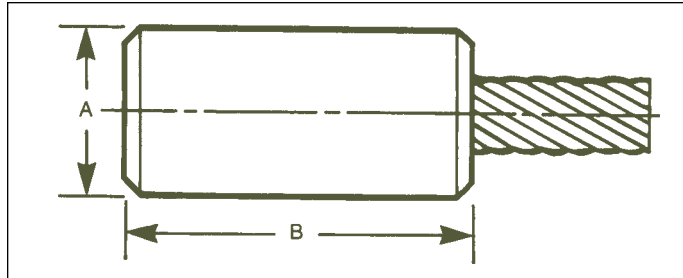
- No assembly time - ready to install
- Stainless steel latch keeps hook in proper place



Winch and Hoist Line Cables

Swaged Steel Buttons

Swaged steel buttons are designed for use as end stops on drum winding equipment such as hoists and winches.



After Swage Dimensions

Rope Diameter (approx. in.)	A	B
1/4	5/8	1 1/8
5/16	3/4	1 1/2
3/8	7/8	1 3/4
7/16	1	2
1/2	1 1/8	2 3/8
9/16	1 1/4	2 5/8
5/8	1 3/8	2 7/8
3/4	1 1/2	3 1/2
7/8	1 3/4	4 1/8
1	2	4 3/4
1 1/8	2 1/4	5 1/4
1 1/4	2 1/2	5 7/8
1 3/8	2 3/4	6 1/2
1 1/2	3	7 1/8

Non-Standard Buttons available.



Running lengths of cable with thimbled eye ends available

Wire Rope

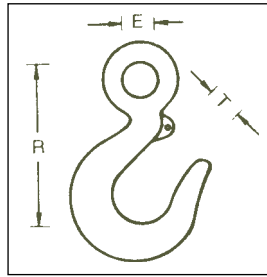
6 x 19 Class-Bright (Uncoated)

Diameter (in.)	Breaking Strength
	IWRC
3/8	14,000 lbs.
7/16	19,000 lbs.
1/2	25,000 lbs.
9/16	32,000 lbs.
5/8	39,000 lbs.

SLING ATTACHMENTS, HOOKS, ETC.

Alloy Steel Eye Hooks

- Light weight hooks for heavy duty lifting



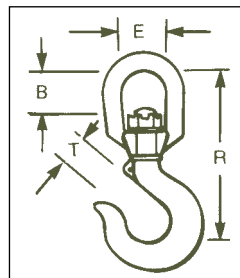
EIP IWRC Rope Dia. (in.)	Rated Capacity* (tons)	Dimension (in.)				Weight Each (lbs.)
		E	R	T	T w/ Latch	
1/4-5/16	1	3/4	3 1/8	1	7/8	.63
3/8	1 1/2	7/8	3 21/32	1 1/16	15/16	.85
7/16	2	1 1/8	4 3/32	1 1/8	1	1.4
1/2	3	1 1/4	4 11/16	1 1/4	1 1/8	1.9
9/16-5/8	4 1/2	1 9/16	5 25/32	1 1/2	1 3/8	3.7
3/4	7	2	7 5/16	1 31/32	1 11/16	7.3
7/8-1	11	2 7/8	9 1/16	2 1/4	2 1/16	15
1 1/8-1 1/4	15	2 13/16	10 1/32	2 15/16	2 1/4	22
1 3/8-1 1/2	22	3 1/2	12 15/32	3 11/32	3	38
1 3/4	30	3 1/2	14 1/16	4	3 5/8	60
2	37	4 1/2	18 3/16	4 1/4	3 3/4	105
2 1/4	45	4 15/16	20 1/8	4 3/4	4 1/4	148
2 1/2	60	5 11/16	23 23/32	5 3/4	5 1/8	228

Carbon hooks available.
Stainless steel latch available.



Swivel Eye Hooks

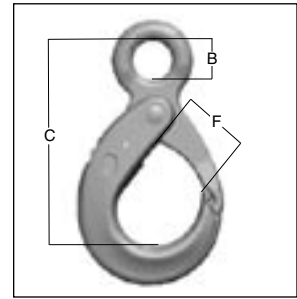
- Hook swivels beneath eye
- Built-in distortion detectors
- Drop forged alloy steel



EIP IWRC Rope Dia. (in.)	Rated Capacity* (tons)	Dimensions (in.)				Weight Each (lbs.)
		E	R	B	T	
1/4-5/16	1	1 1/4	4 5/8	1 3/32	1	1.3
3/8	1 1/2	1 1/2	5 7/16	1 3/8	1 3/32	1.8
7/16	2	1 3/4	6 1/4	1 21/32	1 1/8	2.8
1/2	3	1 3/4	6 1/2	1 21/32	1 1/4	3.3
9/16-5/8	5	2	7 17/32	1 25/32	1 17/32	7.2
3/4	7	2 3/4	9 19/32	2 3/8	1 31/32	13.6

Lodelok Eye Hooks

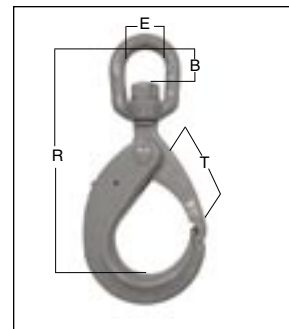
- Heavy duty latch with lock prevents accidental opening
- Drop forged alloy steel



Hook Size	EIP IWRC Rope Dia. (in.)	Rated Capacity* (tons)	Dimensions (in.)			Weight Each (lbs.)
			B	C	F	
9/32	1/4-3/8	1.7	1 3/32	5 3/8	1 5/8	2.5
3/8	7/16-9/16	3.5	1 3/8	6 21/32	2 1/4	4.6
1/2	5/8-3/4	6.0	1 9/16	8 25/32	2 29/32	10
5/8	7/8	9.0	2	10 3/8	3 3/16	16

Swivel Lodelok Hooks With Bushings

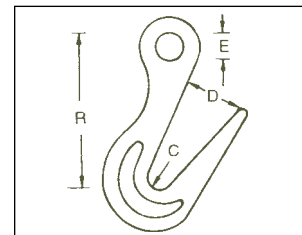
- Hook swivels beneath the eye
- Heavy duty latch with lock prevents accidental opening
- Drop forged alloy steel



EIP IWRC Rope Dia. (in.)	Rated Capacity* (tons)	Dimensions (in.)				Weight Each (lbs.)
		E	R	B	T	
1/4-3/8	1.7	1 1/2	7 5/32	1 5/16	1 5/8	3.5
7/16-5/8	3.5	1 3/4	8 23/32	1 5/8	2 1/4	4.8
1/2-7/8	6.0	2	11 5/32	1 3/4	2 29/32	10.6
1	9.0	2 3/4	13 13/32	2 3/8	3 3/16	17.0

Sorting Hooks

- Drop forged alloy steel, for maximum strength and toughness.



Dimensions (in.)				Weight (lbs.)
E	R	C	D	
1 7/16	7 11/16	5/8	2 5/8	6.8

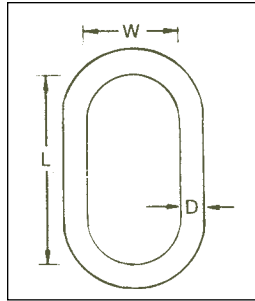
Working load limit at tip - 2 ton.
Working load limit at bottom - 7 1/2 ton.

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

SLING ATTACHMENTS, HOOKS, ETC.

Alloy Oblong Master Links

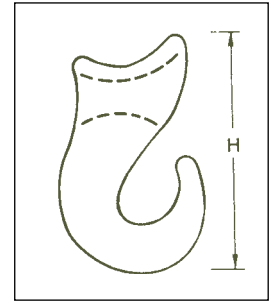
- Drop forged through 1", formed and welded in larger sizes.



Rated Capacity* (tons)	Dimensions (in.)			Weight Each (lbs.)
	D	W	L	
3.05	1/2	2 1/2	5	.9
6.6	3/4	3	6	2.5
11.2	1	4	8	5.8
16.2	1 1/4	4 3/8	8 3/4	9.2
24.5	1 1/2	5 1/4	10 1/2	16
36.7	1 3/4	6	12	25
44.4	2	7	14	37
62.6	2 1/4	8	16	54
93.9	2 3/4	9	16	85

Sliding Choker Hooks

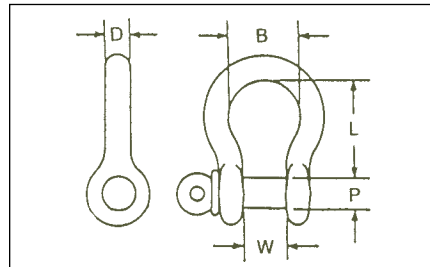
- Speeds rigging time of bundled loads.
- Reduces sling wear when used with thimbles. When using on multi-part slings, contact *Lift-All* for additional information.



Hook No. (Rope Dia.)	Rated Capacity* (tons)	Dimension (in.)	Weight (lbs.)
		H	
3/8	1.3	4 1/4	1.3
1/2	1.7	4 13/16	1.8
5/8	2.5	5 15/16	4
3/4	4.0	6 7/16	4.5
7/8 - 1	7.5	8 1/8	10
1 1/8 - 1 1/4	11.5	11 5/8	26
1 3/8 - 1 1/2	15	14 1/2	50

Screw Pin Anchor Shackles

- Carbon Shackle
- Alloy pin
- Heat treated and tempered



Note: This chart shows standard capacities and dimensions, but may vary depending on source of supply. Specify required capacity if critical.

Shackle Size Dim. D (in.)	Rated Capacity* (tons)		Dimensions (in.)				Weight per 100 Pieces (lbs.)
	CM	Others	P	W	L	B	
3/16	1/2	1/3	1/4	3/8	7/8	5/8	6
1/4	3/4	1/2	5/16	15/32	1 1/8	13/16	12
5/16	1	3/4	3/8	17/32	1 1/4	7/8	20
3/8	1 1/2	1	7/16	21/32	1 7/16	1 1/16	30
7/16	2	1 1/2	1/2	23/32	1 11/16	1 1/4	50
1/2	3	2	5/8	13/16	1 15/16	1 7/16	75
5/8	4 1/2	3 1/4	3/4	1 1/16	2 13/32	1 3/4	130
3/4	6 1/2	4 3/4	7/8	1 1/4	2 27/32	2	225
7/8	8 1/2	6 1/2	1	1 7/16	3 5/16	2 5/16	350
1	10	8 1/2	1 1/8	1 11/16	3 3/4	2 9/16	500
1 1/8	12	9 1/2	1 1/4	1 13/16	4 1/4	2 15/16	700
1 1/4	14	12	1 3/8	2 1/32	4 11/16	3 1/4	950
1 3/8	17	13 1/2	1 1/2	2 1/4	5 1/4	3 1/2	1250
1 1/2	20	17	1 5/8	2 3/8	5 3/4	3 3/4	1720
1 5/8	24	24	1 3/4	2 5/8	6 1/4	4 3/8	2350
1 3/4	30	25	2	2 7/8	7	5	2770
2	35	35	2 1/4	3 1/4	7 3/4	5 3/4	3900

WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to Effect of Angle chart page 10.

CABLE & COMPONENTS

Wire Rope



Galvanized and Stainless Steel Cable

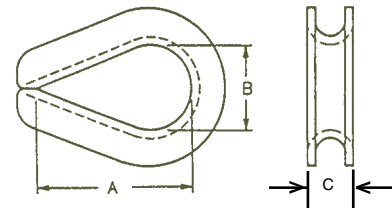
7 x 7	Cable Diameter (in.)	Wt./Reel (lbs.)	Standard Length (ft./Reel)	Nominal Break Strength (lbs.)	
				Galvanized Cable (GAC)	Stainless Steel Cable (SSAC) Type 304
	1/16	5	500	480	480
	3/32	9	500	920	920
	1/8	15	500	1,700	1,760

7 x 19	Cable Diameter (in.)	Wt./Reel (lbs.)	Standard Length (ft./Reel)	Galvanized Cable (GAC)	Stainless Steel Cable (SSAC) Type 304					
						3/32	9	500	1,000	920
						1/8	15	500	2,000	1,760
						5/32	12	250	2,800	2,400
						3/16	17	250	4,200	3,700
						1/4	25	250	7,000	6,400
						5/16	38	200	9,800	9,000
3/8	52	200	14,400	12,000						

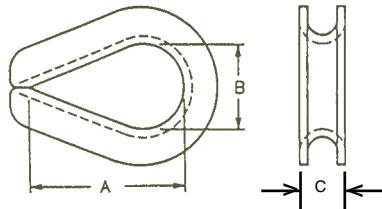
Galvanized Cable Coated with Clear Vinyl

Galvanized Cable Construction	Cable Diameter (in.)	Coated To: (in.)	Wt./Reel (lbs.)	Standard Length (ft./Reel)	Nominal Break Strength (lbs.)
7 x 7	1/16	3/32	7	500	480
	3/32	3/16	7	250	920
	1/8	3/16	10	250	1,700
7 x 19	1/8	3/16	10	250	2,000
	3/16	1/4	19	200	4,200
	1/4	5/16	28	200	7,000

Heavy Duty Wire Rope Thimbles



Standard Wire Rope Thimbles



Rope Dia. (in.)	Dimensions (in.)			Quantity Per Bag	Weight Per Bag (lbs.)
	A	B	C		
1/8	1 5/16	11/16	1/4	100	4
3/16	1 5/16	11/16	5/16	100	4
1/4	1 5/16	11/16	3/8	100	4
5/16	1 1/2	13/16	7/16	80	3
3/8	1 5/8	15/16	1/2	80	4

Rope Dia. (in.)	Dimensions (in.)			Weight Per 100 Pieces (lbs.)
	A	B	C	
1/4	1 5/8	7/8	15/16	8
5/16	1 7/8	1 1/16	17/32	14
3/8	2 1/8	1 1/8	21/32	22
7/16	2 5/16	1 1/4	3/4	36
1/2	2 3/4	1 1/2	15/16	51
5/8	3 1/4	1 3/4	1 1/32	75
3/4	3 3/4	2	1 1/4	147
7/8	4 1/4	2 1/4	1 7/16	185
1	4 1/2	2 1/2	1 11/16	300
1 1/8 - 1 1/4	5 1/8	2 7/8	1 13/16	400
1 1/4 - 1 3/8	6 1/2	3 1/2	2 3/16	817
1 3/8 - 1 1/2	6 1/4	3 1/2	2 9/16	1,175
1 5/8	8	4	2 23/32	1,700
1 3/4	9	4 1/2	2 27/32	1,775
1 7/8 - 2	12	6	3 3/32	2,500
2 1/4	14	7	3 5/8	3,950

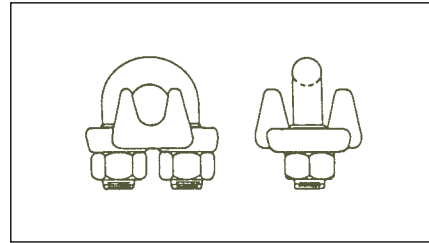
CABLE & COMPONENTS

Wire Rope Clips

The following instructions, supplied by the Wire Rope Technical Board, will result in an approximate 80% efficiency rating when the clips are applied as instructed, on GAC, SSAC, RRL or RLL, 6 x 19 class or 6 x 37 class, fiber core or IWRC, non-Seale type construction wire rope. If applied to vinyl coated ropes, vinyl must first be stripped from clip connection area.

How to Apply Clips

1. Turn back the specified amount of rope from the thimble. Apply the first clip one clip width from the dead end of the wire rope (U-bolt over dead end - live end rests in clip saddle). Tighten nuts evenly to recommended torque.
2. Apply the next clip as near to the loop as possible. Turn on nuts firmly but do not tighten.
3. Space additional clips, if required, equally between the first two. Tighten on nuts - take up rope slack - tighten all nuts evenly on all clips to recommended torque.
4. **NOTICE!** Apply the initial load and retighten nuts to the recommended torque. Rope will stretch and be reduced in diameter when loads are applied. Inspect periodically and retighten to recommended torque.



Right Way - For Maximum Rope Strength



Wrong Way - Clips Staggered



Wrong Way - Clips Reversed

▲ WARNING

Failure to make a termination in accordance with aforementioned instructions, or failure to periodically check and retighten to the recommended torque, may result in death or serious injury.

Drop Forged Wire Rope Clips

Rope Dia. (in.)	Minimum Number of Clips	Rope Turn-back (in.)	Torque (ft./lbs.)	Weight Per 100 Pieces (lbs.)
1/8	2	3 1/4	4 1/2	6
3/16	2	3 3/4	7 1/2	10
1/4	2	4 3/4	15	18
5/16	2	5 1/4	30	30
3/8	2	6 1/2	45	47
7/16	2	7	65	76
1/2	3	11 1/2	65	80
9/16	3	12	95	104
5/8	3	12	95	106
3/4	4	18	130	150
7/8	4	19	225	212
1	5	26	225	250
1 1/8	6	34	225	280
1 1/4	7	44	360	415
1 3/8	7	44	360	460
1 1/2	8	54	360	530

Malleable Wire Rope Clips

Rope Dia. (in.)	Minimum Number of Clips	Rope Turn-back (in.)	Torque (ft./ lbs.)	Quantity Per Bag	Weight Per Bag (lbs.)
1/8	3	5	3	200	10
3/16	3	6	5	150	12
1/4	3	7	15	100	12
5/16	3	8	15	100	15
3/8	3	10	30	50	11

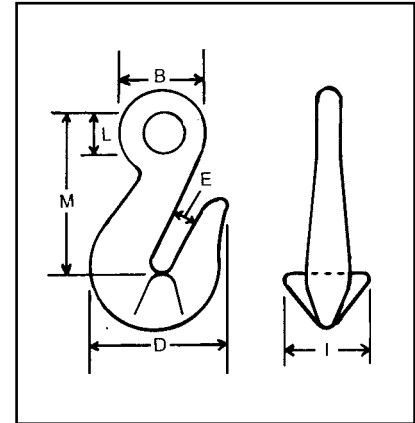
Note: Malleable clips are not to be used for overhead lifting. Use in light duty, non-critical applications only.

HOOKS, MASTER LINKS, ETC.

Cradle Grab Eye Hook / Code G

Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)						Weight Each (lbs.)
		B	D	E	I	L	M	
7/32	2,100	1.19	1.75	.36	1.19	.63	1.63	0.4
9/32	3,500	1.38	1.81	.36	1.19	.63	2.36	0.4
3/8	7,100	1.78	2.63	.45	1.75	.78	3.11	1.1
1/2	12,000	2.28	3.34	.59	1.88	1.03	3.94	2.3
5/8	18,100	2.75	4.08	.75	2.25	1.25	4.78	4.4
3/4	28,300	3.19	5.23	.88	2.88	1.44	6.25	8.8
7/8	34,200	3.75	5.69	1.00	3.00	1.75	6.50	10
1	47,700	4.31	7.00	1.19	3.88	1.88	8.09	21
1 1/4**	72,300	5.38	8.50	1.50	2.50	2.25	10.50	40



Grade 100

7/32	2,700	Use 9/32" Hook						
9/32	4,300	1.38	1.91	.36	1.06	.63	2.56	0.6
3/8	8,800	1.78	2.78	.47	1.38	.78	3.28	1.4
1/2	15,000	2.28	3.63	.59	1.81	1.03	4.22	3.1
5/8	22,600	2.75	4.08	.75	2.25	1.25	4.78	4.4
3/4	35,300	3.19	5.23	.88	2.88	1.44	6.25	8.8

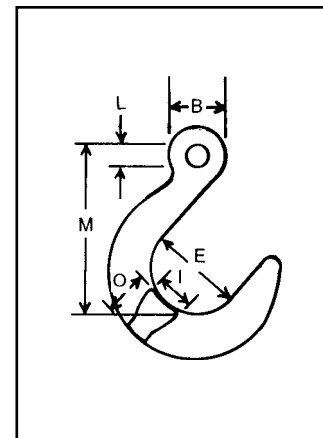
** NOT cradle type

Note: Non-Cradle Grab Hooks are available upon request.

Foundry Hook / Code F

Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)						Weight Each (lbs.)
		B	E	I	L	M	O	
9/32	3,500	1.56	2.50	1.00	.63	4.75	1.23	2.4
3/8	7,100	2.00	3.00	1.27	.75	5.75	1.50	4.5
1/2	12,000	2.50	3.50	1.50	1.00	6.88	1.75	7.1
5/8	18,100	3.00	4.00	1.81	1.25	8.06	2.03	12
3/4	28,300	3.50	4.50	2.20	1.50	9.25	2.56	20
7/8	34,200	4.00	5.00	2.25	1.75	10.38	2.78	26
1	47,700	4.50	5.50	2.59	2.13	11.56	3.03	37
1 1/4	72,300	5.13	6.00	3.17	2.38	12.88	3.81	58



Grade 100

9/32	5,700	1.56	2.50	1.00	.63	4.75	1.23	2.4
3/8	8,800	2.00	3.00	1.27	.75	5.75	1.50	4.5
1/2	15,000	2.50	3.50	1.50	1.00	6.88	1.75	7.1
5/8	22,600	3.00	4.00	1.81	1.25	8.06	2.03	12
3/4	35,300	3.50	4.50	2.20	1.50	9.25	2.56	20

*

WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 85 and Effect of Angle chart page 10.

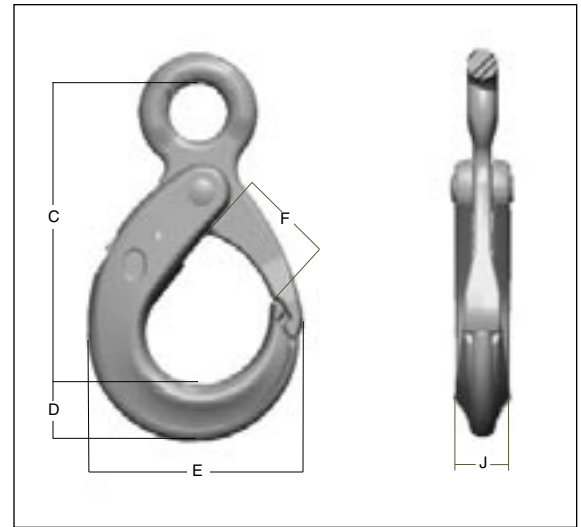
HOOKS, MASTER LINKS, ETC.

Lodelok Eye Hooks

Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)					Weight Each (lbs.)
		C	D	E	F	J	
9/32	4,300	5.37	.88	3.77	1.64	.91	2.5
3/8	8,800	6.65	1.07	4.76	2.27	1.14	4.6
1/2	15,000	8.79	1.58	6.26	2.91	1.46	10.0
5/8	22,600	10.36	1.97	7.37	3.20	1.81	16.0

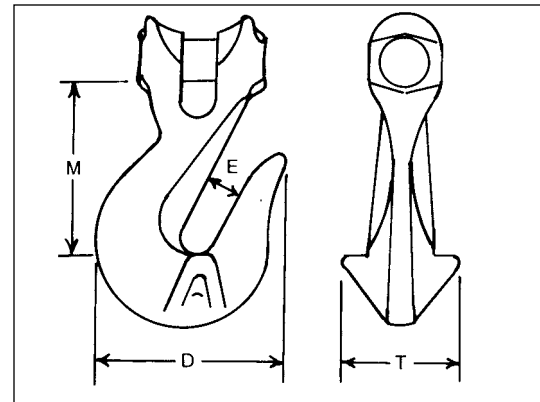
Design factor @ 4:1



Cradle Grab Clevis Hook / Code G

Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		D	E	T	M	
9/32	3,500	1.78	.36	1.19	1.63	0.5
3/8	7,100	2.56	.47	1.75	2.11	1.2
1/2	12,000	3.25	.59	2.13	2.88	2.4
5/8	18,100	4.08	.75	2.50	3.56	4.2
3/4	28,300	5.23	.88	2.88	5.50	9.6

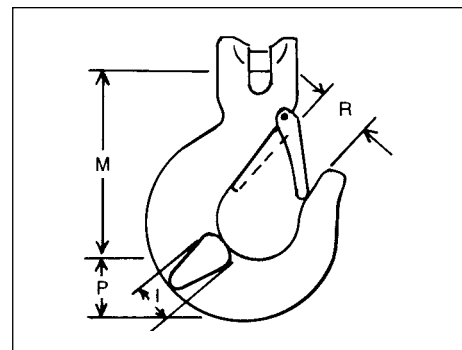


LiftAlloy Chain

Chain Sling Clevis Hook with Optional Latch / Code S

Grade 80

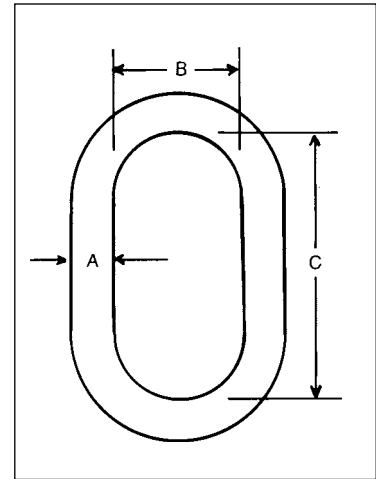
Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		I	M	P	R	
9/32	3,500	.73	3.44	1.05	1.06	0.8
3/8	7,100	.95	4.47	1.28	1.31	2.0
1/2	12,000	1.17	5.27	1.66	1.56	4.5
5/8	18,100	1.44	6.08	2.19	1.75	6.5
3/4	28,300	1.69	7.34	2.56	2.19	12



HOOKS, MASTER LINKS, ETC.

Oblong Master Link / Code O

Link Size * (in.)			Type & Size of Chain Sling on which used				Weight Each (lbs.)
Diameter Material A	Inside Width B	Inside Length C	Single	Double	Triple	Quad	
13/32	1 1/2	3	7/32	7/32	-	-	0.3
1/2	2 1/2	5	9/32	9/32	7/32	7/32	0.8
3/4	3	6	3/8	3/8	9/32	9/32	2.1
1	4	8	1/2 or 5/8	1/2	3/8	3/8	4.6
1 1/4	4 3/8	8 3/4	3/4	5/8	1/2	1/2	9.2
1 1/2	5 1/4	10 1/2	7/8	3/4	5/8	5/8	16
1 3/4	6	12	1	7/8	3/4	3/4	25
2	7	14	1 1/4	1	7/8	7/8	37
2 1/4	8	16	-	1 1/4	1	1	54
2 3/4	9	16	-	-	1 1/4	1 1/4	85



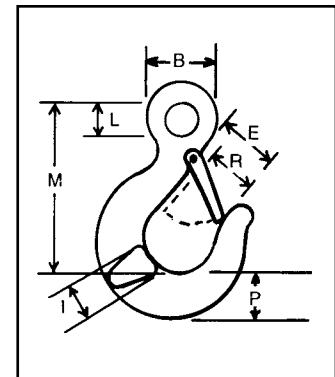
* If sub-assemblies are used, inside dimensions may be reduced. Contact Lift-All if critical.

LiftAlloy Chain

Chain Sling Eye Hook with Optional Latch / Code S

Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)							Weight Each (lbs.)
		B	E	I	L	M	P	R	
7/32	2,100	-	1.25	.78	.75	3.06	.86	1.11	0.7
9/32	3,500	1.62	1.19	.73	.75	3.75	1.05	1.06	1.1
3/8	7,100	2.06	1.44	.95	.94	4.78	1.28	1.31	1.9
1/2	12,000	2.63	1.78	1.17	1.13	5.69	1.66	1.56	4.5
5/8	18,100	3.06	2.03	1.44	1.31	6.50	2.19	1.75	7.3
3/4	28,300	3.50	2.50	1.69	1.50	7.81	2.51	2.19	11
7/8	34,200	3.88	2.78	1.94	1.69	8.75	2.84	2.38	18
1	47,700	4.31	3.13	2.14	1.88	9.88	3.09	2.78	23
1 1/4	72,300	5.31	3.88	2.62	2.31	11.50	3.89	3.41	36



Grade 100

7/32	2,700	Use 9/32" Hook							
9/32	5,700	1.62	1.19	.73	.75	3.75	1.05	1.06	1.1
3/8	8,800	2.06	1.44	.95	.94	4.78	1.28	1.31	1.9
1/2	15,000	2.63	1.78	1.17	1.13	5.69	1.66	1.56	4.5
5/8	22,600	3.06	2.03	1.44	1.31	6.50	2.19	1.75	7.3
3/4	35,300	3.50	2.50	1.69	1.50	7.81	2.51	2.19	11

Note: When ordering, specify latch if desired.

HOOKS, MASTER LINKS, ETC.

Mechanical Coupling Links Grade 80

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		A	B	C	E	
7/32	2,100	.25	1.41	.49	.41	0.12
9/32	3,500	.31	1.81	.63	.50	0.23
3/8	7,100	.50	2.41	.83	.75	0.65
1/2	12,000	.69	3.38	1.22	1.00	1.5
5/8	18,100	.81	4.06	1.50	1.25	2.6
3/4	28,300	.94	4.78	1.80	1.50	3.8
7/8	34,200	1.05	5.13	1.91	1.75	6.3
1	47,700	1.25	5.75	2.19	2.00	9.3
1 1/4	72,300	1.53	6.81	2.63	2.25	17

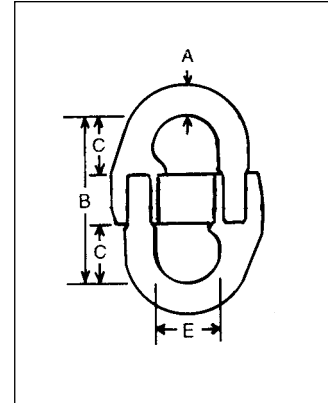
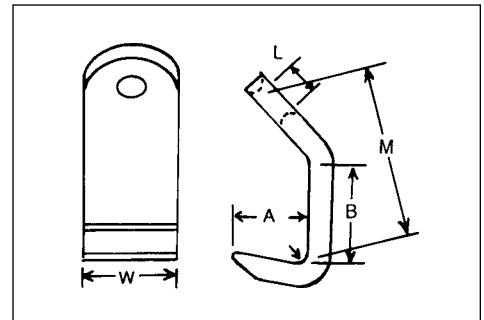


Plate Hook

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)					Weight Each (lbs.)
		A	B	L	M	W	
9/32	4,200	2.00	1.75	1.00	3.68	2.50	2.8
3/8	7,400	2.63	3.00	1.12	6.38	2.75	5.7
1/2	13,000	3.50	4.00	1.50	7.37	3.50	13
5/8	20,400	4.38	5.00	1.88	9.25	5.00	27
3/4	30,000	5.18	6.00	2.25	10.88	5.75	42
7/8	40,000	6.00	7.00	2.63	13.68	6.00	65

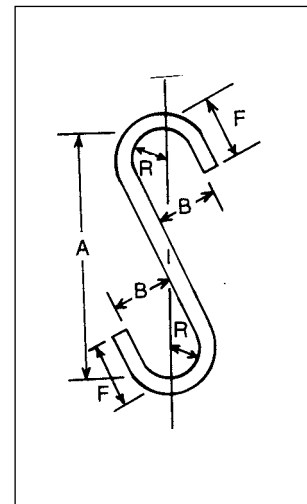


LiftAlloy Chain

* Ratings are per hook
Do not use plate hooks at angles other than 60° from horizontal.
Do not attempt to lift using only one plate hook.

S Hook

Stock Dia. (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		A	B	F	R	
9/32	210	4 1/2	1 1/8	1 1/8	9/16	0.15
3/8	410	6	1 1/2	1 1/2	3/4	0.35
1/2	870	7 1/2	2	2	1	0.82
5/8	1,120	9	2 1/2	2 1/2	1 1/4	1.6
3/4	1,730	10 1/2	3	3	1 1/2	2.6
7/8	2,370	12	3 1/2	3 1/2	1 3/4	4.2
1	2,920	13	4	4	2	6.0
1 5/32	3,150	15	4 1/2	4 1/2	2 1/4	9.3
1 1/4	4,450	16	5	5	2 1/2	12
1 3/8	6,100	17	5 1/2	5 1/2	2 3/4	15
1 1/2	6,250	18	6	6	3	20



See page 116 for J-Hooks and Custom Engineered Lifting Devices.

*

⚠ WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 85 and Effect of Angle chart page 10.