

WEB SLING HARDWARE

Steel *Unilink* Web Sling Hardware Combination Triangle and Choker Fitting

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

Features, Advantages and Benefits

Promotes Safety

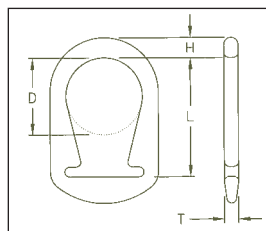
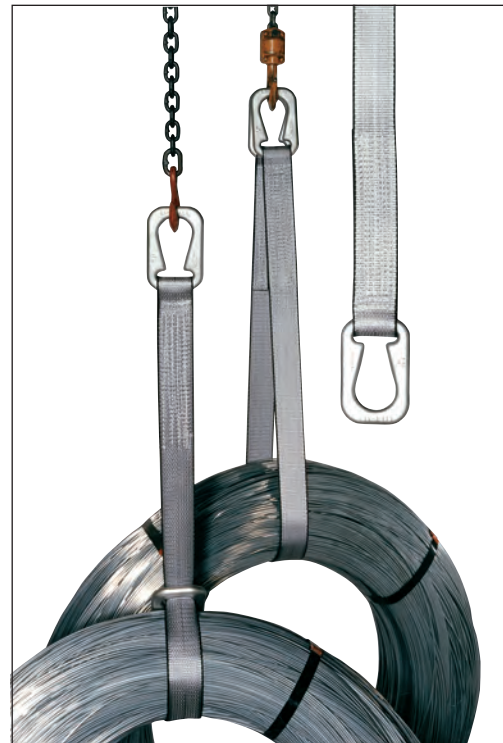
- Forged steel for strength and reliability
- Smooth rounded profile helps protect sling, worker and load

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.

Web
Slings



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

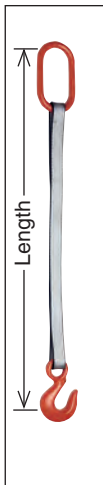
Web-Trap Triangles							Web-Trap Chokers						
Web Width	Part No.	Dimensions (in.)				Weight (lbs.)	Part No.	Dimensions (in.)					Weight (lbs.)
		L	D	T	H			L	A	D	T	H	
8"	ST1-8	7 3/4	4	1/2	1 1/4	8	SC1-8	11 1/4	7 1/2	4	1/2	1 7/16	16
10"	ST1-10	8 1/2	5	3/4	1 7/16	16	SC1-10	12 7/8	8 1/4	5	3/4	1 1/2	28
12"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

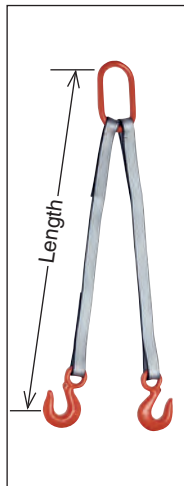
Web-Trap Triangles							Web-Trap Chokers						
Web Width	Part No.	Dimensions (in.)				Weight (lbs.)	Part No.	Dimensions (in.)					Weight (lbs.)
		L	D	T	H			L	A	D	T	H	
8"	ST2-8	7 3/4	4	3/4	1 1/4	12	SC2-8	11 1/4	7 1/2	4	3/4	1 7/16	25
10"	ST2-10	8 1/2	5	1	1 7/16	21	SC2-10	12 7/8	8 1/4	5	1	1 1/2	38
12"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

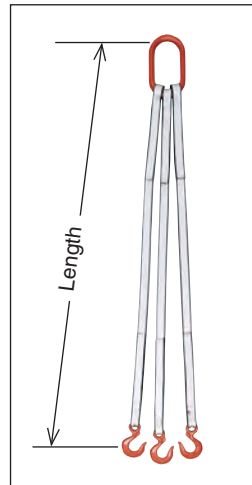
TUFF-EDGE II HARDWARE / BRIDLE SLINGS



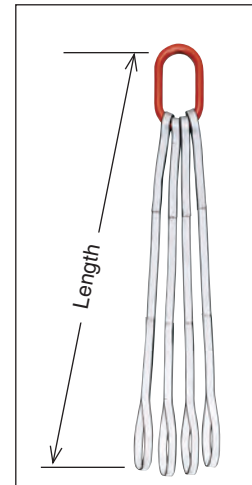
SOS
Single Leg
Oblong Link
Sling Hook
(EE1801T)



DOS
Double Leg
Oblong Link
Sling Hook
(EE1801T)



TOS
Triple Leg
Oblong Link
Sling Hook
(EE1801T)



QOE
Quad Leg
Oblong Link
(EE1801T)



Hardware/Bridle Slings

Part No. For Web Sling Legs	Web Width (in.)	Web Plies	Number of Legs	Rated Capacity (lbs.)*				Alloy Sling Hook	Oblong Link
				Vertical	@ 60°	@ 45°	@ 30°	Size	Dia. (in.)
EE1801T	1	1	Single	1,600				1TA	1/2
	1	1	Double		2,700	2,200	1,600	1TA	1/2
	1	1	Triple		4,100	3,300	2,400	1TA	3/4
	1	1	Quad		5,500	4,500	3,200	1TA	1
EE2801T	1	2	Single	3,000				1 1/2TA	1/2
	1	2	Double		5,100	4,200	3,000	1 1/2TA	3/4
	1	2	Triple		7,700	6,300	4,500	1 1/2TA	3/4
	1	2	Quad		10,300	8,400	6,000	1 1/2TA	1
EE1802T	2	1	Single	3,000				1 1/2TA	1/2
	2	1	Double		5,100	4,200	3,000	1 1/2TA	3/4
	2	1	Triple		7,700	6,300	4,500	1 1/2TA	3/4
	2	1	Quad		10,300	8,400	6,000	1 1/2TA	1
EE2802T	2	2	Single	6,000				3TA	3/4
	2	2	Double		10,300	8,400	6,000	3TA	1
	2	2	Triple		15,500	12,700	9,000	3TA	1
	2	2	Quad		20,700	16,900	12,000	3TA	1 1/4

NOTE: Hardware capacities correspond to the appropriate sling capacities. See hardware dimension charts starting on page 91



Do not exceed rated capacities. Sling tension increases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to Effect of Angle chart page 12.

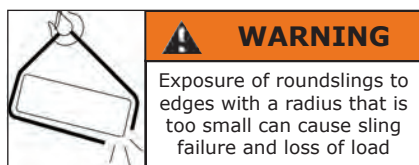
USING TUFLEX ROUNDSLINGS

Protect Sling from Damage

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

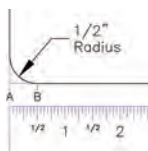
Do not ignore warning signs of misuse. Cut marks detected during any sling inspection serve as a clear signal that sling protection must be added or improved.

Exposure of slings to edges



Edges do not need to be “sharp” to cause failure of the sling. The following table shows the minimum allowable edge radii suitable for contact with unprotected roundslings. Chamfering or cutting off edges is not an acceptable substitute for fully rounding the edges to the minimum radius. Slings can also be damaged from contact with edges or burrs at the sling connection.

Measure the edge radius. The radius is equal to the distance between points A and B.



Minimum Edge Radii suitable for contact with unprotected polyester roundslings.

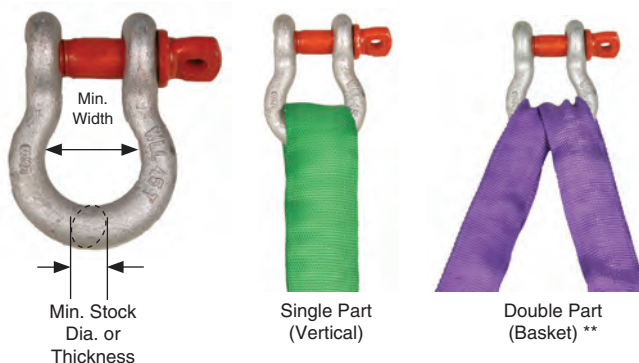
Vertical Rated Capacity (lbs.)	Minimum * Edge Radii (in.)	Sling Width At Load (in.)
EN30	3/16	1
EN60	1/4	1 3/8
EN90	5/16	1 3/4
EN120	5/16	1 7/8
EN150	3/8	2
EN180	7/16	2 1/8
EN240	7/16	2 5/8
EN360	1/2	3 1/4
EN600	11/16	4
EN800	3/4	4 5/8
EN1000	7/8	5 1/4

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

Sling Hardware and Connections

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

(Contact Lift-All, or see WSTDA RS-1 for information about how to calculate whether a smaller connection size is allowable when tension on a roundslings is less than its capacity)



Minimum hardware dimensions suitable for use with roundslings.

Tuflex Size	Single Part		Double Part	
	Min. Stock Dia. (In.)	Min. Width (In.)	Min. Stock Dia. (In.)	Min. Width (In.)
EN30	7/16	1	9/16	1 3/8
EN60	5/8	1 3/8	7/8	1 7/8
EN90	3/4	1 3/4	1 1/16	2 3/8
EN120	7/8	1 7/8	1 1/4	2 1/2
EN150	1	2	1 3/8	2 7/8
EN180	1 1/8	2 1/8	1 5/8	3
EN240	1 3/16	2 5/8	1 5/8	3 3/4
EN360	1 1/2	3 1/4	2	4 1/2
EN600	2	4	2 3/4	5 5/8
EN800	2 1/8	4 5/8	3	6 1/2
EN1000	2 1/2	5 1/4	3 1/2	7 3/8

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

DIRECT CONNECT HOOKS™

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

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



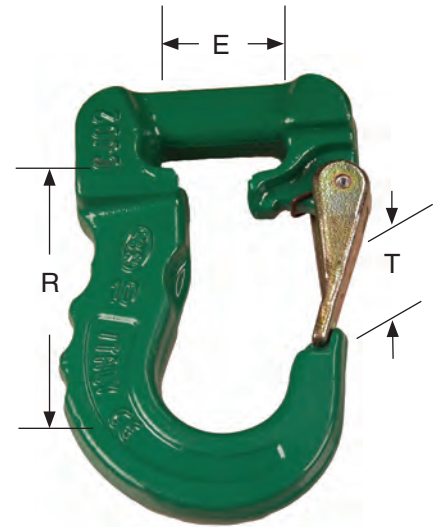
Tuflex

Features:

- Rugged – Both alloy steel hook and latch are forged for superior toughness.
- Color coded – Hook color matches Tuflex color for easy identification
- Web-Trap design keeps sling in place, ready to use
- Four hook sizes to match Tuflex sizes EN30 (Purple), EN60 (Green), EN90 (Yellow) and EN150 (Red)
- Can be used with 1" and 2" web slings (see chart below)

Benefits:

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



Lift-All Part #	Color	Rated Cap. (lbs.)	Tuflex	Web Slings		Weight (lbs.)	E (in.)	R (in.)	T (in.)
				Width	Plies				
DCH1	Purple	2,600	EN30	1	1	1.5	1 9/16	3 3/8	1
DCH2	Green	5,300	EN60	1	2	2.7	1 3/4	4	1 5/16
DCH3	Yellow	8,400	EN90	2	1 & 2	4.9	2 3/16	4 5/8	1 1/2
DCH4	Red	13,200	EN150	-	-	9.9	2 3/4	5 3/4	1 3/4

TUFLEX HARDWARE / BRIDLE SLINGS

Features, Benefits and Advantages

Promotes Safety

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

Saves Money

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

Saves Time

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

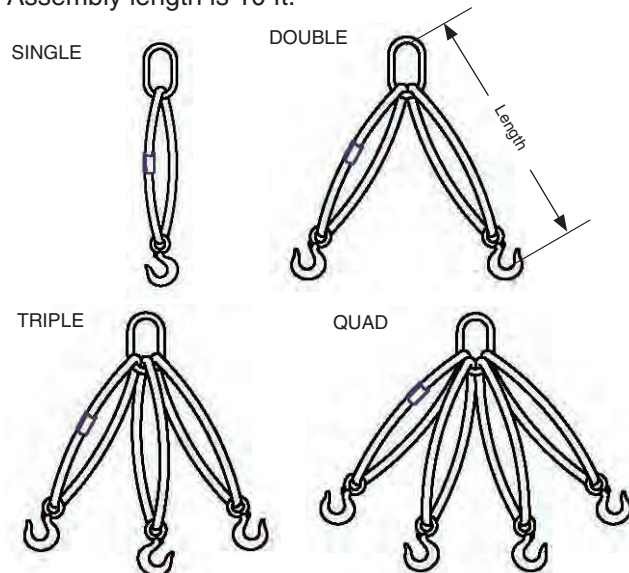
How to Order

Specify:

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

Example:

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



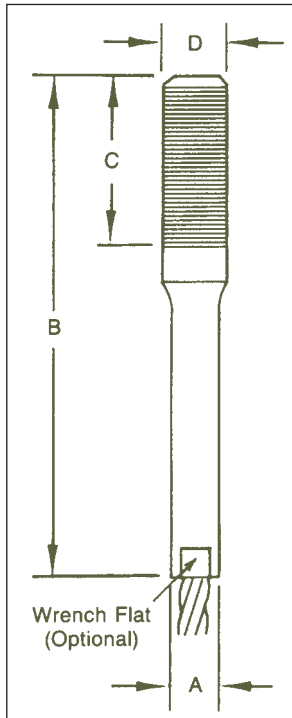
*See hardware dimension charts on page 91.

Use sling leg calculator to determine length @ www.lift-all.com

Legs	Tuflex Size		Rated Capacity (lbs.) for the following hitches			Hardware*	
			Vertical	Choker	Basket	Hook	Masterlink Stock Dia. (in.)
SINGLE	EN30		2,600	2,100	5,200	2TA	1/2
	EN60		5,300	4,200	10,600	4.5TA	3/4
	EN90		8,400	6,700	16,800	7TA	3/4
	EN120		10,600	8,500	21,200	11TA	3/4
	EN150		13,200	10,600	26,400	11TA	1
	EN180		16,800	13,400	33,600	15TA	1 1/4
	EN240		21,200	17,000	42,400	22TA	1 1/4
	EN360		31,000	24,800	62,000	20TC	1 1/2
	EN600		53,000	42,400	106,000	30TC	2
	EN800		66,000	52,800	132,000	40TC	2 1/4
	EN1000		90,000	72,000	180,000	NA	2 1/2
				One Leg @ 90°	All Legs @		
			60°	45°	30°		
DOUBLE	EN30	2,600	4,500	3,600	2,600	2TA	1/2
	EN60	5,300	9,100	7,400	5,300	4.5TA	3/4
	EN90	8,400	14,500	11,800	8,400	7TA	1
	EN120	10,600	18,300	14,900	10,600	11TA	1 1/4
	EN150	13,200	22,800	18,600	13,200	11TA	1 1/4
	EN180	16,800	29,100	23,700	16,800	15TA	1 1/2
	EN240	21,200	36,700	29,900	21,200	22TA	1 1/2
	EN360	31,000	53,700	43,800	31,000	20TC	2
	EN600	53,000	91,800	74,900	53,000	30TC	2 1/2
	EN800	66,000	114,300	93,300	66,000	40TC	3
	EN1000	90,000	155,800	127,200	90,000	NA	3 1/4
	TRIPLE	EN30	2,600	6,700	5,500	3,900	2TA
EN60		5,300	13,700	11,200	7,900	4.5TA	1
EN90		8,400	21,800	17,800	12,600	7TA	1 1/4
EN120		10,600	27,500	22,400	15,900	11TA	1 1/2
EN150		13,200	34,200	27,900	19,800	11TA	1 1/2
EN180		16,800	43,600	35,600	25,200	15TA	1 3/4
EN240		21,200	55,000	44,900	31,800	22TA	2
EN360		31,000	80,500	65,700	46,500	20TC	2 1/4
EN600		53,000	137,600	112,400	75,900	30TC	2 3/4
EN800		66,000	171,400	139,900	99,000	40TC	3 1/2
EN1000		90,000	233,800	190,800	135,000	NA	4 1/4
QUAD		EN30	2,600	9,000	7,300	5,200	2TA
	EN60	5,300	18,300	14,900	10,600	4.5TA	1 1/4
	EN90	8,400	29,100	23,700	16,800	7TA	1 1/2
	EN120	10,600	36,700	29,900	21,200	11TA	1 1/2
	EN150	13,200	45,700	37,300	26,400	11TA	1 3/4
	EN180	16,800	58,200	47,500	33,600	15TA	2
	EN240	21,200	73,400	59,900	42,400	22TA	2 1/4
	EN360	31,000	107,300	87,600	62,000	20TC	2 3/4
	EN600	53,000	183,600	149,900	106,000	30TC	3 1/2
	EN800	66,000	228,600	186,600	132,000	40TC	4 1/4
	EN1000	90,000	311,700	254,500	180,000	NA	4 3/4

SWAGED THREADED STUDS

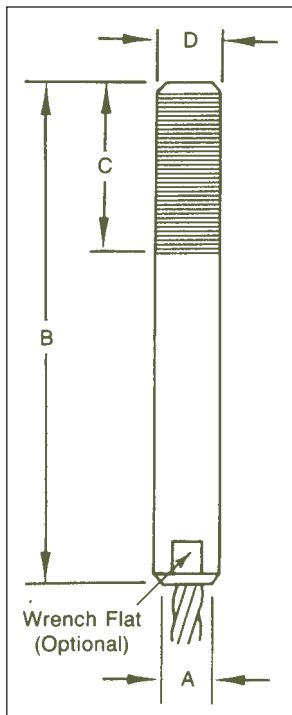
- Choice of studs made of specially selected carbon steel or stainless steel
- Custom OEM engineering available



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

Wire Rope



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

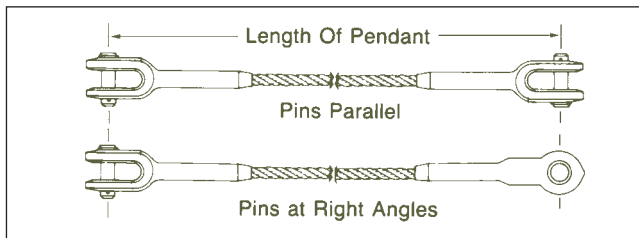
Promotes Safety

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

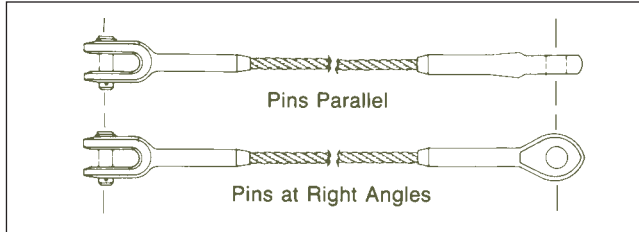
Saves Money

- Custom engineered assemblies are available for specific rigging needs

Open Swaged Sockets



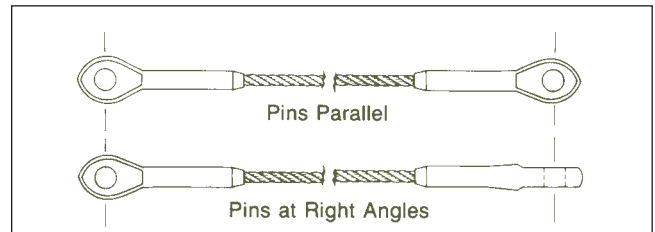
Open and Closed Swaged Sockets



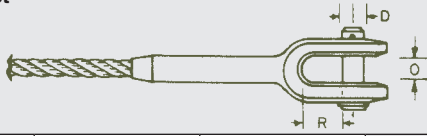
 Rope Diameter (in.)	Minimum Pendant Length	 Vertical Capacity (tons) *
1/4	11"	.68
5/16	1' 3"	1.1
3/8	1' 3"	1.5
7/16	1' 8"	2.0
1/2	1' 8"	2.7
9/16	2' 0"	3.4
5/8	2' 0"	4.1
3/4	2' 5"	5.9
7/8	2' 10"	8.0
1	3' 2"	10
1 1/8	3' 7"	13
1 1/4	4' 0"	16

* 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.

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



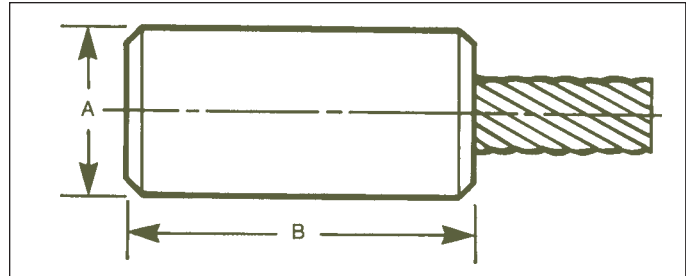
Winch and Hoist Line Cables

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.

Swaged Steel Buttons

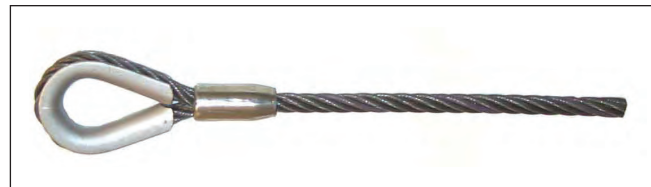
Swaged steel buttons are designed for use as end stops on drum winding equipment such as hoists and winches.



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.



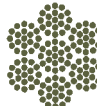
Running lengths of cable with thimble eye ends available

CABLE & COMPONENTS



Galvanized and Stainless Steel Cable

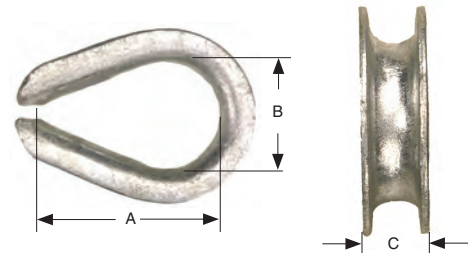
7 x 7	Cable Diameter (in.)	Wt./Reel (lbs.)	Standard Length (ft./Reel)	Nominal Break Strength (lbs.)	
				Galvanized Cable (GAC)	Stainless Steel Cable (SSAC) Type 304
	1/16	5	500	480	480
	3/32	9	500	920	920
	1/8	15	500	1,700	1,760

7 x 19		Cable Diameter (in.)	Wt./Reel (lbs.)	Standard Length (ft./Reel)	Nominal Break Strength (lbs.)	
					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

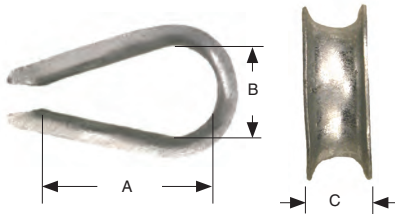
Galvanized Cable Coated with Clear Vinyl

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	7/16	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	5 1/8	2 7/8	1 13/16	400
1 1/4	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

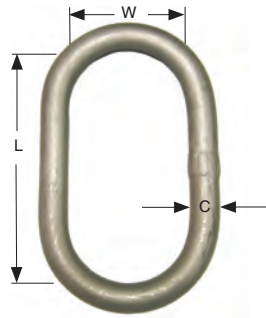
Rope Dia. (in.)	Minimum Number of Clips	Rope Turn-back (in.)	Torque (ft./lbs.)	Quantity Per Bag	Weight Per Bag (lbs.)
1/8	3	5	3	200	10
3/16	3	6	5	150	12
1/4	3	7	15	100	12
5/16	3	8	15	100	15
3/8	3	10	30	50	11

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

SLING ATTACHMENTS, HOOKS, ETC.

Alloy Oblong Master Links

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



Rated Capacity*		Dimensions (in.)			Weight Each (lbs.)
Tons	Lbs.	C	L	W	
3.05	6,100	1/2	5	2 1/2	.9
6.6	13,200	3/4	6	3	2.5
11.2	22,400	1	8	4	5.8
16.2	32,400	1 1/4	8 3/4	4 3/8	9.2
24.5	49,000	1 1/2	10 1/2	5 1/4	16
36.7	73,400	1 3/4	12	6	25
44.4	88,800	2	14	7	37
62.6	125,200	2 1/4	16	8	54
93.9	187,800	2 3/4	16	9	85

Sliding Choker Hooks

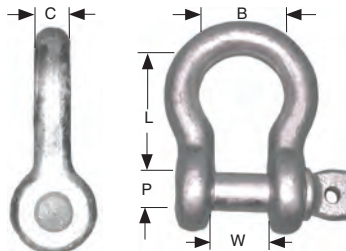
- Speeds rigging time of bundled loads.
- Reduces sling wear when used with thimbles. When using on multi-part slings, contact *Lift-All* for additional information.



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
- Hot dip galvanized



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

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



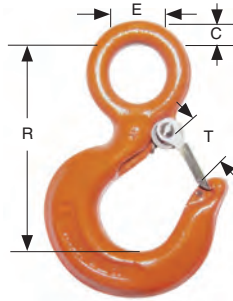
WARNING

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 12. Rated Capacity Design Factor 5:1.

SLING ATTACHMENTS, HOOKS, ETC.

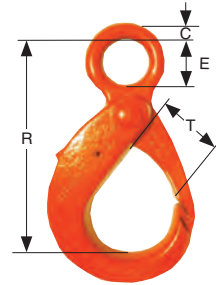
Rigging Eye Hooks

- Drop forged alloy steel
- Lightweight hooks for heavy duty lifting



Latchlok Eye Hooks

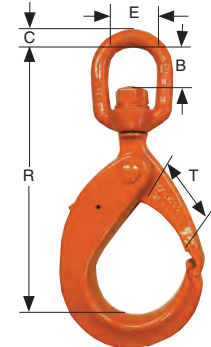
- Heavy duty latch with lock prevents accidental opening
- Drop forged alloy steel



Rated Capacity		Dimensions (in.)				Weight Each (lbs.)
Tons	Lbs.	C	E	R	T	
1.7	3,400	7/16	1 3/32	5 3/8	1 5/8	2.1
3.5	7,000	19/32	1 3/8	6 21/32	1 9/32	3.9
6.0	12,000	25/32	1 9/16	8 25/32	2 29/32	8.8
9.0	18,000	1 1/32	2	10 11/32	3 3/16	14

Swivel Latchlok Hooks With Bushings

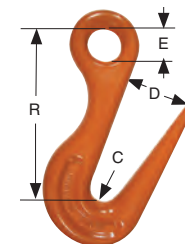
- Hook swivels beneath the eye
- Heavy duty latch with lock prevents accidental opening
- Drop forged alloy steel



Rated Capacity		Dimensions (in.)					Weight Each (lbs.)
Tons	Lbs.	B	C	E	R	T	
1.7	3,400	1 11/32	5/8	1 1/2	7 5/32	1 5/8	3.5
3.5	7,000	1 5/8	3/4	1 3/4	8 23/32	2 1/4	4.8
6.0	12,000	1 3/4	15/16	2	11 3/16	2 29/32	10.6
9.0	18,000	2 3/8	1	2 3/4	13 13/32	3 3/16	17.0

Sorting Hooks

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



Dimensions (in.)				Weight (lbs.)
C (Rad.)	D	E	R	
5/8	2 13/16	1 7/16	7 11/32	6.8

Working load limit at tip - 2 ton.

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

	Rated Capacity		Dimension (in.)				Weight Each (lbs.)
	Tons	Lbs.	C	E	R	T	
Alloy	1	2,000	3/8	3/4	3 1/8	15/16	.63
	1 1/2	3,000	7/16	7/8	3 21/32	31/32	.85
	2	4,000	1/2	1 1/8	4 3/32	1 1/16	1.4
	3	6,000	5/8	1 1/4	4 21/32	1 3/16	1.9
	4 1/2	9,000	3/4	1 9/16	5 25/32	1 1/2	3.7
	7	14,000	15/16	2	7 5/16	1 25/32	7.3
	11	22,000	1 1/8	2 7/16	9 1/32	2 3/8	15
	15	30,000	1 1/4	2 27/32	10 7/32	2 1/2	22
	22	44,000	1 9/16	3 1/2	12 13/16	3 5/16	38
Carbon	20	40,000	1 3/4	3 1/2	14 1/16	4	60
	30	60,000	2 3/16	4 15/16	20 1/8	4 3/4	148
	40	80,000	2 17/32	5	23 23/32	5 3/4	227

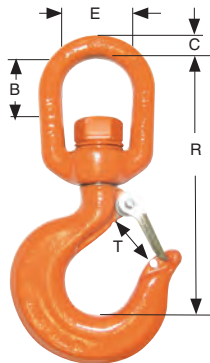
Carbon hooks available.



Stainless steel latch available.

Swivel Rigging Eye Hooks

- Hook swivels beneath eye
- Drop forged alloy steel



Rated Capacity		Dimensions (in.)					Weight Each (lbs.)
Tons	Lbs.	B	C	E	R	T	
1	2,000	1 1/8	3/8	1 1/4	4 5/8	15/16	1.1
1 1/2	3,000	1 3/8	1/2	1 1/2	5 7/16	31/32	1.6
2	4,000	1 21/32	5/8	1 3/4	6 1/4	1 1/16	2.5
3	6,000	1 21/32	11/16	1 3/4	6 1/2	1 5/32	3.2
5	10,000	1 25/32	3/4	2	7 17/32	1 13/32	5.4
7	14,000	2 3/8	1	2 3/4	9 21/32	1 11/16	10.6

* **WARNING** Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to Effect of Angle chart page 12. Rated Capacity Design Factor 5:1.

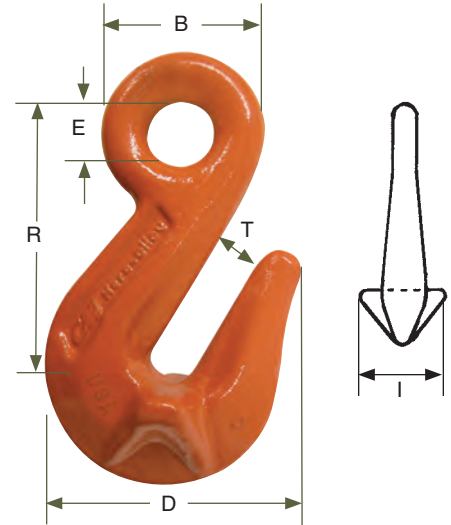
HOOKS, MASTER LINKS, ETC.

Cradle Grab Eye Hook / Code G

Grade	Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)						Weight Each (lbs.)
			B	D	E	I	R	T	
100	7/32	2,700	1.19	1.50	.55	.92	2.20	.31	0.4
100	9/32	4,300	1.38	1.91	.63	1.06	2.57	.36	0.6
100	3/8	8,800	1.78	2.86	.78	1.38	3.28	.47	1.4
100	1/2	15,000	2.28	3.63	1.03	1.81	4.22	.59	3.1
100	5/8	22,600	2.75	4.08	1.25	2.25	4.78	.75	4.4
100	3/4	35,300	3.50	5.23	1.50	2.88	6.67	.88	8.8
80	7/8	34,200	3.75	5.69	1.75	3.00	6.50	1.00	10
80	1	47,700	4.31	7.00	1.88	3.88	8.09	1.19	21
80	1 1/4	72,300	5.38	8.50	2.25	2.50	10.50	1.50	40

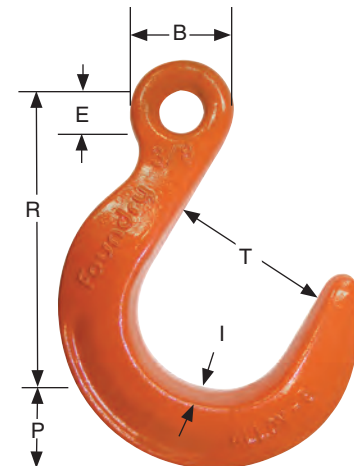
** NOT cradle type

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



Foundry Hook / Code F

Grade	Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)						Weight Each (lbs.)
			B	E	I	P	R	T	
100	9/32	4,300	1.56	.63	1.00	1.24	4.75	2.50	2.4
100	3/8	8,800	2.00	.75	1.27	1.50	5.75	3.00	4.5
100	1/2	15,000	2.50	1.00	1.50	1.75	6.88	3.50	7.1
100	5/8	22,600	3.00	1.25	1.81	2.03	8.06	4.00	12
100	3/4	35,300	3.50	1.50	2.20	2.56	9.25	4.50	20
80	7/8	34,200	4.00	1.75	2.25	2.78	10.38	5.00	26
80	1	47,700	4.50	2.13	2.59	3.03	11.56	5.50	37
80	1 1/4	72,300	5.13	2.38	3.17	3.81	12.88	6.00	58



*

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 99 and Effect of Angle chart page 12.

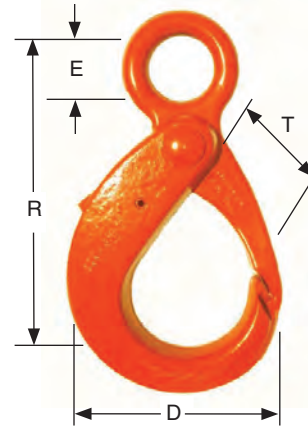
HOOKS, MASTER LINKS, ETC.

Latchlok Eye Hooks / Code L

Grade 100

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		D	E	R	T	
9/32	4,300	3.77	1.09	5.37	1.64	2.1
3/8	8,800	4.74	1.36	6.65	2.27	3.9
1/2	15,000	6.26	1.55	8.77	2.91	8.8
5/8	22,600	7.37	2.00	10.35	3.20	14

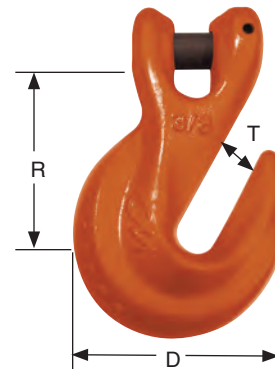
Design factor @ 4:1



Clevis Cradle Grab Hook / Code G

Grade 100

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)			Weight Each (lbs.)
		D	R	T	
9/32	4,300	2.18	1.86	0.38	0.6
3/8	8,800	2.71	2.47	0.47	1.3
1/2	15,000	3.65	3.04	0.65	2.1
5/8	22,600	4.5	3.75	0.79	4.2



LiftAlloy
Chain

Clevis Sling Hook with Optional Latch / Code S

Grade 100

Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
		D	L	P	R	
9/32	4,300	3.53	0.83	1.11	3.75	1.2
3/8	8,800	4.54	1.06	1.51	4.58	2.2
1/2	15,000	5.48	1.38	1.61	5.59	4.2
5/8	22,600	6.20	1.69	1.92	6.44	6.6
3/4	35,300	7.06	2.09	2.08	7.50	11

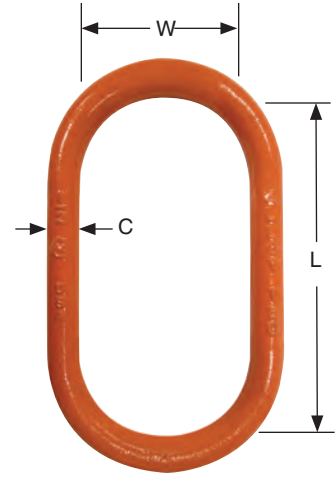


HOOKS, MASTER LINKS, ETC.

Oblong Master Link / Code O

Link Size * (in.)			Type & Size of Chain Sling on which used				Weight Each (lbs.)
Diameter Material C	Inside Width W	Inside Length L	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	0.9
3/4	3	6	3/8	3/8	9/32	9/32	2.5
1	4	8	1/2 or 5/8	1/2	3/8	3/8	5.8
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

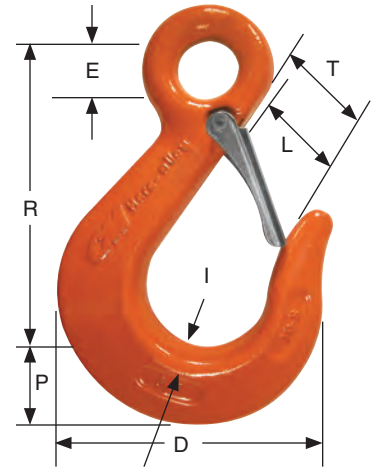
* If sub-assemblies are used, inside dimensions may be reduced.
Contact Lift-All if critical.



Chain Sling Eye Hook with Optional Latch / Code S

Grade	Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)							Weight Each (lbs.)
			D	E	I	L	P	R	T	
100	7/32	2,700	3.04	.75	.94	.83	.94	3.75	.97	0.7
100	9/32	4,300	3.50	.75	.73	1.06	1.05	3.75	1.19	1.1
100	3/8	8,800	4.33	.94	.95	1.31	1.28	4.78	1.44	1.9
100	1/2	15,000	5.50	1.13	1.17	1.63	1.66	5.69	1.78	4.5
100	5/8	22,600	6.34	1.31	1.44	1.75	2.19	6.50	2.03	7.3
100	3/4	35,300	7.83	1.50	1.69	2.19	2.51	7.81	2.50	11
80	7/8	34,200	8.59	1.69	1.94	2.38	2.84	8.75	2.78	18
80	1	47,700	9.59	1.88	2.14	2.88	3.09	9.88	3.13	23
80	1 1/4	72,300	11.56	2.31	2.62	3.41	3.89	11.50	3.88	36

Note: When ordering, specify latch if desired.



HOOKS, MASTER LINKS, ETC.

Mechanical Coupling Links

Grade	Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)				Weight Each (lbs.)
			A	B	C	E	
100	7/32	2,700	.35	1.19	.69	.54	0.27
100	9/32	4,300	.41	1.94	.70	.59	0.27
100	3/8	8,800	.55	2.99	1.13	.93	0.87
100	1/2	15,000	.75	3.97	1.43	1.12	1.86
100	5/8	22,600	.87	4.50	1.70	1.35	3.14
100	3/4	35,200	1.07	5.36	2.09	1.54	5.80
80	7/8	34,200	1.05	5.25	1.80	1.92	6.30
80	1	47,700	1.25	6.00	2.31	2.37	8.95
80	1 1/4	72,300	1.53	6.81	2.17	2.70	16.40

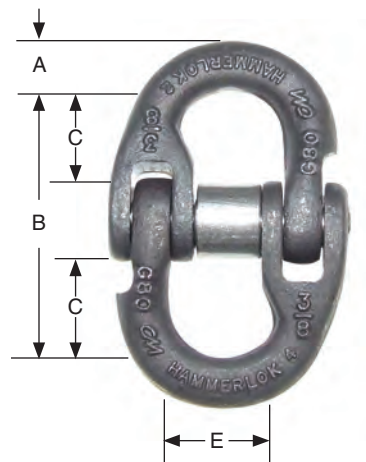
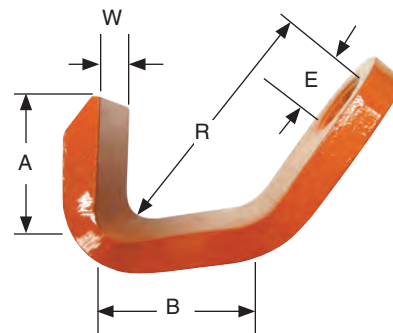


Plate Hook

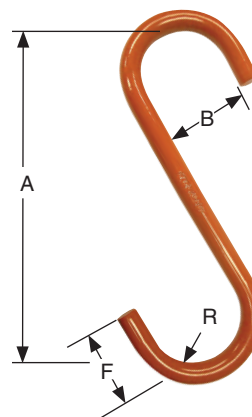
Chain Size (in.)	Rated Capacity* (lbs.)	Dimensions (in.)					Weight Each (lbs.)
		A	B	E	R	W	
9/32	4,200	2.00	1.75	1.00	3.68	2.50	2.8
3/8	7,400	2.63	3.00	1.12	6.38	2.75	5.7
1/2	13,000	3.50	4.00	1.50	7.37	3.50	13
5/8	20,400	4.38	5.00	1.88	9.25	5.00	27
3/4	30,000	5.18	6.00	2.25	10.88	5.75	42
7/8	40,000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



* 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 136 for J-Hooks and Custom Engineered Lifting Devices.

*



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 99 and Effect of Angle chart page 12.