

**Phoenix Rope & Rigging LLC.**  
**Wire Rope Products**

# PHOENIX ROPE & RIGGING, INC. • PHOENIX ROPE & PRP STAINLESS

Whether you are rigging a crane, rigging for below the hook, rigging for Yachts, Architectural or Theatrical, we have the product line that supports all types of rigging!

The merger between PRR and PRP created a double product line for each company, proudly displayed here in our new-concept catalog. On one side, take the time to browse our Phoenix Rope catalog. Here you will find products made of carbon and alloy steel. Flip the catalog over and you will find our signature PRP Stainless line, offering

a wide variety of corrosion-resistant wire rope, fittings and chain.

These products are available from our warehouses on each U.S. coast, tailored to fit requirements in a myriad of rigging applications. We travel the world over to ensure that the best of materials and processes are utilized in every step of manufacturing. All at fair, competitive pricing. After all, your success is our goal!

## WARNINGS AND DEFINITIONS

### READ ALL WARNINGS BEFORE USING THIS CATALOG!

Failure to follow warnings and instructions may result in serious injury or death. Anyone using this publication must read and understand all warnings and other information contained within. The following applies to all products in this catalog.

Phoenix Rope & Rigging LLC. assumes no responsibility for the use or misapplication of any product sold by this firm. Responsibility for design and use decisions rests with the user. All products are sold with the express understanding that the purchaser is thoroughly familiar with the correct application and safe use of same. USE ALL PRODUCTS PROPERLY, IN A SAFE MANNER AND FOR THE APPLICATION WHICH THEY ARE INTENDED.

Information in this catalog is subject to change, all weights and dimensions are approximate. Ratings are stated in short tons (2,000 lbs.) or pounds. All dimensions are in inches; all weights are in pounds, unless stated otherwise.

**WORKING LOAD LIMIT (WLL)** The Working Load Limit is the maximum load which should ever be applied to the product, even when the product is new and when the load is uniformly applied straight line pull only. AVOID SIDE LOADING. All catalog ratings are based upon usual environmental conditions and consideration must be given to unusual conditions such as extreme high heat or low temperatures, chemical solutions or vapors, prolonged immersion in salt water, etc. NEVER EXCEED THE WLL.

**BREAKING STRENGTH/ULTIMATE STRENGTH** Do not use breaking strength as a criterion for service or design purposes. Refer to the Working Load Limit instead. Breaking Strength is the average force at which the product, in the condition it would leave the factory, has been found by representative testing to break, when a constantly increasing force is applied in direct line to the product at a uniform rate of speed on a standard pull testing machine. REMEMBER: Breaking Strengths, when published, were obtained under controlled laboratory conditions. Listing of the Breaking Strength does not mean the Working Load Limit should ever be exceeded.

**PROOF TEST LOAD (PROOF LOAD)** The term "Proof Test" designated a quality control test applied to the product for the sole purpose of detecting defects in material or manufacture. The Proof Test Load (usually twice the Working Load Limit) is the load which the product withstood without deformation when new and under laboratory test conditions. A constantly increasing force is applied in direct line to the product at a uniform rate of speed on a standard pull-testing machine. The Proof Test Load does not mean the Working Load Limit should ever be exceeded.

**SHOCK LOAD** A load resulting from rapid change of movement, such as impacting, jerking, or swinging of a static load. Sudden release of tension is another form of shock loading. Shock loads are generally significantly greater than static loads. Any shock loading must be considered when selecting the item for use in a system. AVOID SHOCK LOADS AS THEY MAY EXCEED THE WORKING LOAD LIMIT.

**INSPECT PRODUCTS REGULARLY** No product can keep operating at its rated capacity indefinitely. Periodic inspections help determine when to replace a product and reduce rigging hazards. Check for visible damage, cracks, wear, elongation, rust, etc. When in doubt about the extent of the damage, retire the item in question immediately. DESTROY RATHER THAN DISCARD, ITEMS THAT HAVE BEEN JUDGED DEFECTIVE! They might be used again by someone not aware of the hazard or the defect.

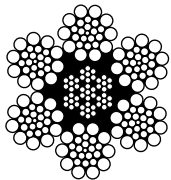
**REMEMBER: ANY PRODUCT WILL BREAK IF ABUSED, MISUSED, OVERUSED OR NOT MAINTAINED PROPERLY.** Such breaks can cause loads to fall or swing out of control, possibly resulting in serious injury or death as well as major property damage.

1. INSPECT PRODUCTS REGULARLY
2. MATCH COMPONENTS PROPERLY
3. KEEP OUT FROM UNDER A RAISED LOAD
4. AVOID SHOCK LOADS
5. FOLLOW A.S.M.E AND ANSI SPECIFICATIONS
6. FOLLOW OSHA GUIDELINES FOR CRITERIA FOR REMOVAL OF SERVICE

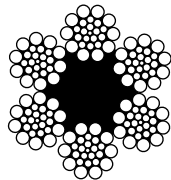
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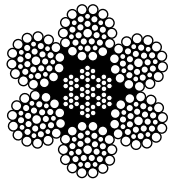
All wire rope is manufactured in accordance with U.S. Federal Specification RR-W-410



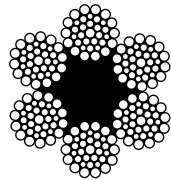
**6 x 26WS IWRC**



**6 x 26WS FC**



**6 x 36WS IWRC**



**6 x 36WS FC**

### 6 x 19/37 Class Bright Wire Rope

Size (In)	Approx. Wt. per ft (Lbs)		Nominal Breaking Load (Lbx)			
	FC	IWRC	I.P.S.		E.I.P.S.	
			FC	IWRC	FC	IWRC
1/4	0.015	0.116	5,480	5,880	6,040	6,880
5/16	0.164	0.18	8,520	9,160	9,380	10,540
3/8	0.236	0.26	12,200	13,120	13,420	15,100
7/16	0.32	0.35	16,540	17,780	18,180	20,400
1/2	0.42	0.46	21,400	23,000	23,600	26,600
9/16	0.53	0.59	27,000	29,000	29,800	33,600
5/8	0.66	0.72	33,400	35,800	36,600	41,200
3/4	0.95	1.04	47,600	51,200	52,400	58,800
7/8	1.29	1.42	64,400	69,200	70,800	79,600
1	1.68	1.85	83,600	89,800	92,000	103,400
1-1/8	2.13	2.34	105,200	113,000	115,800	130,000
1-1/4	2.63	2.89	129,200	138,800	142,000	159,800
1-3/8	3.18	3.50	155,400	167,000	170,800	192,000
1-1/2	3.78	4.16	184,000	197,800	202,000	228,000
1-5/8	4.44	4.88	214,000	230,000	236,000	264,000
1-3/4	5.15	5.67	248,000	266,000	272,000	306,000
1-7/8	5.91	6.50	282,000	304,000	310,000	348,000
2	6.72	7.39	320,000	344,000	352,000	396,000

### 6 x 19/37 Class Galvanized Wire Rope

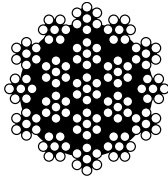
**Drawn Galvanized Wire Rope Available:**

Drawn Galvanized Wire Rope is equal in strength to the same size and type of Bright wire rope. Specification RR-W-410

IPS - Improved Plow Steel

EIPS - Extra Improved Plow Steel

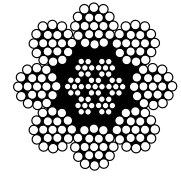
Size (In)	Approx. Wt. per ft (Lbs)		Nominal Breaking Load (Lbx)			
	FC	IWRC	I.P.S.		E.I.P.S.	
			FC	IWRC	FC	IWRC
1/4	0.015	0.116	5,480	5,880	6,040	6,880
5/16	0.164	0.18	8,520	9,160	9,380	10,540
3/8	0.236	0.26	12,200	13,120	13,420	15,100
7/16	0.32	0.35	16,540	17,780	18,180	20,400
1/2	0.42	0.46	21,400	23,000	23,600	26,600
9/16	0.53	0.59	27,000	29,000	29,800	33,600
5/8	0.66	0.72	33,400	35,800	36,600	41,200
3/4	0.95	1.04	47,600	51,200	52,400	58,800
7/8	1.29	1.42	64,400	69,200	70,800	79,600
1	1.68	1.85	83,600	89,800	92,000	103,400
1-1/8	2.13	2.34	105,200	113,000	115,800	130,000
1-1/4	2.63	2.89	129,200	138,800	142,000	159,800
1-3/8	3.18	3.50	155,400	167,000	170,800	192,000
1-1/2	3.78	4.16	184,000	197,800	202,000	228,000
1-5/8	4.44	4.88	214,000	230,000	236,000	264,000
1-3/4	5.15	5.67	248,000	266,000	272,000	306,000
1-7/8	5.91	6.50	282,000	304,000	310,000	348,000
2	6.72	7.39	320,000	344,000	352,000	396,000



### 19 x 7 Rotation Resistant

Size (In)	Approx. Wt per ft (Lbs)	Nominal Breaking Load (Lbs)	
		I.P.S.	E.I.P.S.
**3/8	0.18	11,520	13,260
7/16	0.26	15,600	17,940
**1/2	0.45	19,700	21,600
**9/16	0.58	24,800	27,200
**5/8	0.71	30,600	33,600
**3/4	1.02	43,600	48,000
7/8	1.39	59,000	65,000
1	1.82	76,600	84,400

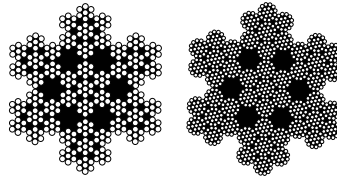
\*\* Available in Galvanized



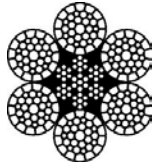
### 8 x 19 Rotation Resistant

Size (In)	Approx. Wt per ft (Lbs)	Nominal Breaking Load (Lbs)	
		I.P.S.	E.I.P.S.
3/8	0.26	11,520	13,260
7/16	0.36	15,600	17,940
1/2	0.47	20,200	23,200
9/16	0.60	25,600	29,400
5/8	0.73	31,400	36,200
3/4	1.06	45,000	51,800
7/8	1.44	61,000	70,000
1	1.88	79,200	91,000

### 7 x 7 x 7, 7 x 7 x 19 Galvanized Cable-Laid



Const.	Size (In)	Approx. Wt per ft (Lbs)	Nominal Breaking Load (Lbs)		
			Grade A	Grade B	Grade C
7x7x7	3/8	0.195	9,350	10,200	11,100
7x7x7	1/2	0.346	16,400	17,900	19,400
7x7x7	5/8	0.558	26,500	28,900	31,300
7x7x19	3/4	0.776	36,600	39,900	43,300
7x7x19	1	1.387	65,300	71,200	77,200
7x7x19	1-1/4	2.202	103,600	113,000	122,400



### Compacted 6 - Strands, Bright

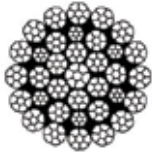
Size (Inch)	Construction	WT / FT	Nominal Strength
1/2	6 x 26 IWRC	0.55	29,200
5/8	6 x 26 IWRC	0.86	45,400
3/4	6 x 26 IWRC	1.25	64,800
7/8	6 x 31 IWRC	1.67	87,600
1	6 x 31 IWRC	2.34	130,839

#### IWRC Compacted offers you:

- Higher Strength than Standard Ropes
- Greater Durability
- Longer Service
- Resiliant to Drum Crushing

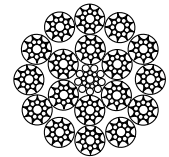
Please contact us for clarification.

### 35 x 7 Compacted, Galvanized, Right Lang Lay



Size (mm)	Approx. Wt per ft (Lbs)	Nominal Breaking Load	
		1960 Grade	2160 Grade
8mm	0.25	-	14,400
10mm	0.33	19,960	22,090
12mm	0.48	27,870	31,470
14mm	0.65	37,200	42,260
16mm	0.85	50,350	56,400
18mm	1.08	61,590	69,240
19mm	1.21	69,010	77,330
20mm	1.34	76,650	85,870
22mm	1.62	93,290	104,760
26mm	2.29	139,606	149,000
28mm	2.62	151,970	170,400
32mm	3.42	196,250	220,310
36mm	4.33	249,530	276,960
38mm	4.85	276,000	294,000

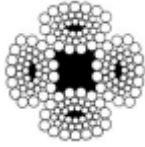
### 19 x 19 IWRC Compacted, Bright, EEIPS, Right Regular Lay



Size (in)	Approx. Wt per ft (Lbs)	E.I.P.S.
1/2	0.510	34,240
9/16	0.647	37,000
5/8	0.809	54,350
3/4	1.14	76,650
7/8	1.56	87,600
1	2.04	134,300

### 8 x 26 IWRC Cushion Core, Galvanized

Size (mm)	Approx. Wt per ft (Lbs)	Breaking Strength (Lbs)
		2160 Grade
16mm	.78	55,303
18mm	1.01	63,396
22mm	1.44	91,000



### 4 x SeS(39) + FC Wire Rope for Cranes

Our 4 x SeS(39) is manufactured specifically for crane applications using superior materials, each perfectly designed to create the finest quality products. The rope is finished through a special forming process after closing the wire rope strands.

Each strand is formed into a triangular shape and the outer surface is abraded.

Generally, it's well known that wire ropes tend to spin or rotate under load. This is inherent to the nature of standard types of ropes due to the variance of the helixes of the individual wires and strands. The 4 x SeS(39) was developed to meet the special demand of various kinds of cranes.

#### Characteristics

##### Higher Breaking Strength

The breaking strength of the 4 x SeS(39) rope is higher than that of 6-strand ropes of equivalent diameter; hence the margin of safety is higher.

##### Reduced Drum Crushing

The 4 x SeS(39) wire rope by design withstands abrasion and improved fit in the grooves of a drum or sheave with reduced friction. This improves life span of the rope, especially in applications which have multiple layers on the drum.

##### Superior Rotation Resistance

The inherent nature to spin or rotate under load, is reduced to a minimum by both design and production methods. The traditional issue of the helix phenomenon has been virtually eliminated.

##### Durability

The smooth surface of this rope reduces and distributes pressure on itself as well as the sheave and drum.

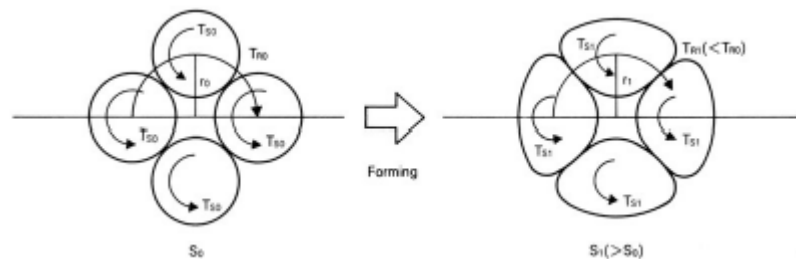
Size (mm)	Weight (lbs per foot)	Nominal Breaking Load (Tons)
26	1.83	48.0
30	2.43	63.9
32	2.77	72.7
33.5	3.03	82.5
34	3.13	82.5
36	3.41	91.9
38	3.86	102.4

Additional Sizes Available Upon Request

The non-rotating property of this wire rope is represented by the rotation index **Ir** which is expressed by the following formula:

$$Ir = (Tr - n \cdot ts) / s$$

**Where**  
**Tr** is the rotation torque of rope  
**Ts** is the rotation torque of strand  
**n** is the number of strands  
**s** is the resistance to the rotation





### 8 x 19 Elevator Wire Rope

8 x 19 Sisal Core, Traction Steel, Pre-Stressed

Description	Size (In)	Size (mm)	Normal Breaking Strength (lbs)	Weight per Foot (lbs)
Bright 8x19(S) FC Traction Steel	3/8"	9.5	8,200	0.20
	1/2"	13	14,500	0.36
	5/8"	16	23,000	0.57
Bright 8x19(S) IWRC Traction Steel	3/8"	9.5	10,836	0.27
	1/2"	13	22,480	0.39
	5/8"	16	34,170	0.70
Bright 8x19(S) FC Extra High Strength Traction Steel	1/2"	13	17,500	0.36
	5/8"	16	27,200	0.57
Bright 8x19(S) FC Traction Steel RLL	1/2"	13	14,500	0.36
	5/8"	16	23,000	0.57

NOTE: Some items subject to special order.

### Elevator Shackles (Wedge Type)

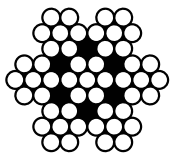
Description	Lengths			Spring
	Overall	Wedge	Thread	Material Dia. x Spring Dia x Length
1/4" - 5/16" (6 - 8mm) without Spring	16.9" (429.4mm)	5.9" (150mm)	M12 x 12" (304.8mm)	N/A
1/4" - 5/16" (6 - 8mm) with Spring	16.9" (429.4mm)	5.9" (150mm)	M12 x 12" (304.8mm)	.17" x 1.4" x 5" (4.3 x 35.1 x 125mm)
3/8" (10mm) without Spring	17" (432mm)	6" (152.4mm)	M16 x 12" (304.8mm)	N/A
3/8" (10mm) with Spring	17" (432mm)	6" (152.4mm)	M16 x 12" (304.8mm)	.17" x 1.4" x 5" (4.3 x 35.1 x 125mm)
1/2" - 5/8" (13 - 16mm) without Spring	24.9" (622mm)	7.5" (190mm)	M20 x 18" (457.2mm)	N/A
1/2" - 5/8" (13 - 16mm) with Spring	24.9" (622mm)	7.5" (190mm)	M20 x 18" (457.2mm)	.4" x 2" x 4" (10 x 50 x 100)



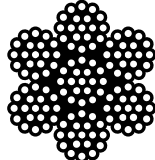


### Hot Dip - EG Available Upon Request

All cables are manufactured in accordance with Federal Specification RR-W-410

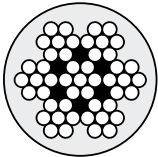


7 X 7

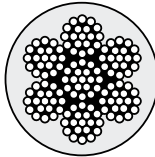


7 x 19

All cables are manufactured in accordance with Federal Specification RR-W-410



7 X 7



7 x 19

## Galvanized Cable

Construction	7 x 7		7 x 19	
	Diameter (in.)	Breaking Strength (Lbs)	Weight per 1000 ft (Lbs)	Breaking Strength(Lbs)
1/16	480	7.5	-	-
3/32	920	16	1,050	16
1/8	1700	28	2,000	29
5/32	2600	43	2,800	45
3/16	3700	62	4,200	65
7/32	-	-	5,600	86
1/4	6100	105	7,000	110
5/16	-	-	9,800	173
3/8	-	-	14,400	243

Galvanized Cable, normally referred to as "aircraft cable" is not intended for aircraft use. It is not certified to MIL-W-83420 because our cable does not go through all the testing requirements, notably the cycle test that is required to be on the federal governments QPL. All other testing and certifications are valid. Mill test certificates are provided upon request.

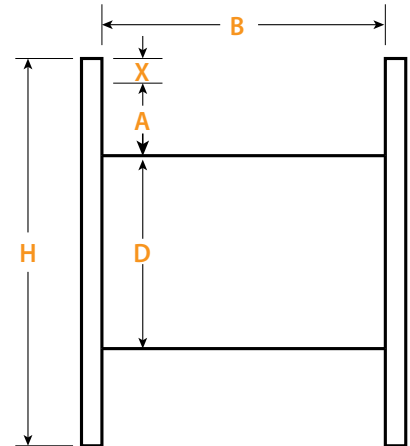
## PVC Coated Galvanized Cable

Cable Diameter (in)	Coating Diameter (in)	Cable Construction	Breaking Strength (lbs)	Weight per 1000 ft (lbs)
1/16	3/32	7 x 7	480	9
3/32	1/8	7 x 7	920	18
1/8	3/16	7 x 7	1,700	35
3/16	1/4	7 x 7	3,700	74
1/8	3/16	7 x 19	2,000	36
3/16	1/4	7 x 19	4,200	77
1/4	5/16	7 x 19	7,000	123
5/16	3/8	7 x 19	9,800	197
3/8	7/16	7 x 19	14,400	270

## SHIPPING REEL CAPACITY

While it is virtually impossible to calculate the precise length of wire rope that can be spooled on a reel or drum, the following formula provides a close approximation.

The formula is :  $L = (A+D) \cdot A \cdot B \cdot K$   
 Where :  
 L = length of rope (ft)  
 A = depth of rope space on drum (inches)  
 B = width of drum between flanges (inches)  
 D = drum barrel diameter (inches)  
 K = constant for given rope diameter (see table below)  
 H = diameter of reel flanges (inches)  
 X = clearance



**TABLE 51 “K” FACTORS\***  
 (0.2618/rope diameter squared)\*\*

Diameter (Inch)	K	Diameter (Inch)	K	Diameter (Inch)	K
1/16	56.9	1/2	0.950	1-3/8	0.126
3/32	25.4	9/16	0.749	1-1/2	0.106
1/8	14.4	5/8	0.608	1-5/8	0.0900
5/32	9.38	11/16	0.502	1-3/4	0.0775
3/16	6.48	3/4	0.422	1-7/8	0.0675
7/32	4.59	13/16	0.360	2	0.0594
1/4	3.73	7/8	0.310	2-1/8	0.0521
5/16	2.39	1	0.237	2-1/4	0.0469
3/8	1.69	1-1/8	0.188	2-3/8	0.0421
7/16	1.24	1-1/4	0.152	2-1/2	0.0380

\*The values given for “K” factors take maximum allowable rope oversize into account. (See Table 3, page 26). These “K” factor values do not apply to certain special ropes such as aircraft cords and elevator ropes. Clearance (“X”) should be about 2 inches unless rope-end fittings require more.

\*\*This formula is based on uniform rope winding on the reel. It will not give correct results if the winding is non-uniform. The formula also assumes that there will be the same number of wraps of rope in each layer. While this is not strictly correct, there is no appreciable error in the result unless the traverse of the reel is quite small relative to the flange diameter (“H”).

All information on this page was obtained from the Wire Rope User’s Manual.



**Hot Dip Galvanized**

Meets Federal Spec.  
FF-C-450  
Type 1, Class 1

**Drop Forged Wire Rope Clips**

Rope Size in Inches	Minimum No. of Clips	* Torque Ft. Lbs.	Length of Turn-back in Inches	Approx Weight per 100pcs (Lbs)
1/8	2	4.5	3-1/4	6
3/16	2	7.5	3-3/4	10
1/4	2	15	4-3/4	18
5/16	2	30	5-1/4	30
3/8	2	45	6-1/2	47
7/16	2	65	7	76
1/2	3	65	11-1/2	80
9/16	3	95	12	104
5/8	3	95	12	106
3/4	4	130	18	150
7/8	4	225	19	212
1	5	225	26	260
1-1/8	6	225	34	290
1-1/4	7	360	44	430
1-3/8	7	360	44	460
1-1/2	8	360	54	540
1-5/8	8	430	58	700
1-3/4	8	590	61	925
2	8	750	71	1,300
2-1/4	8	750	73	1,600
2-1/2	9	750	84	1,900

**WARNING!** Wire Rope Clips are not designed for load carrying purposes or overhead lifting, therefore working load limits have not been established.



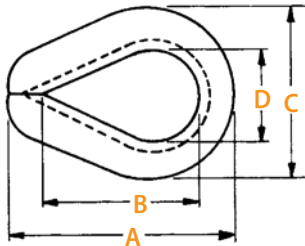
**Electro Galvanized**

Meets Federal Spec.  
FF-C-450  
Type 1, Class 2

**Malleable Wire Rope Clips**

Rope Size in Inches	Minimum No. of Clips	* Torque Ft. Lbs.	Length of Turn-back in Inches	Approx Weight per 100pcs (Lbs)
1/8	3	3.0	4-3/4	3.8
3/16	3	4.5	5-1/2	6.3
1/4	3	15	7	11.8
5/16	3	15	7-3/4	13
3/8	3	30	9-1/2	23
7/16	4	40	10-1/4	23
1/2	4	45	15-1/2	38
9/16	4	50	16	44
5/8	4	75	16	57

**WARNING!** Wire Rope Clips are not designed for load carrying purposes or overhead lifting, therefore working load limits have not been established.



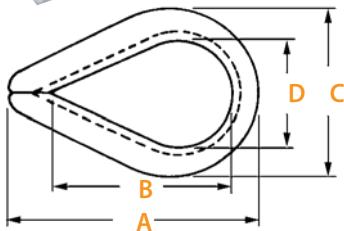
Meets Federal Spec.  
FF-T-276, Type III

### Heavy Duty Thimbles - Hot Dipped Galvanized

Rope Diameter	Weight Per 100 pcs. (lbs.)	Dimensions			
		A	B	C	D
1/4	7	2.19	1.62	1.50	0.88
5/16	12	2.50	1.88	1.81	1.06
3/8	22	2.88	2.12	2.12	1.12
7/16	35	3.25	2.38	2.38	1.25
1/2~9/16	51	3.62	2.75	2.75	1.50
5/8	76	4.25	3.25	3.12	1.75
3/4	158	5.00	3.75	3.81	2.00
7/8	177	5.50	4.25	4.25	2.25
1	313	6.12	4.50	4.75	2.50
1-1/8~1-1/4	400	7.00	5.12	5.88	2.88
1-1/4~1-3/8	811	9.08	6.50	6.81	3.50
1-3/8~1-1/2	1,294	9.00	6.25	7.12	3.50
1-5/8	1,700	11.25	8.00	8.12	4.00
1-3/4	1,775	12.19	9.00	8.50	4.50
1-7/8~2	2,775	15.12	12.00	10.38	6.00

### Super Heavy Thimbles

Rope Diameter	Weight Per 100 pcs. (lbs.)	Dimensions			
		A	B	C	D
5/8	91	4.25	3.25	3.12	1.75
3/4	190	5.00	3.75	3.81	2.00
7/8	212	5.50	4.25	4.25	2.25
1	376	6.12	4.50	4.75	2.50
1-1/4~1-3/8	973	9.08	6.50	6.81	3.50



Meets Federal Spec.  
FF-T-276, Type II

### Standard Thimbles - Hot Dipped Galvanized

Rope Diameter	Weight Per 100 pcs. (lbs.)	Dimensions			
		A	B	C	D
1/8	2.00	1.94	1.31	1.06	0.69
3/16	2.70	1.94	1.31	1.06	0.69
1/4	3.50	1.94	1.31	1.06	0.69
5/16	3.60	2.13	1.50	1.25	0.81
3/8	5.80	2.38	1.63	1.47	0.94
7/16	10.00	2.47	1.71	1.62	1.03
1/2	11.60	2.75	1.88	1.75	1.13
5/8	32.00	3.50	2.25	2.38	1.38
3/4	49.00	3.75	2.50	2.69	1.63
7/8	83.00	5.00	3.50	3.19	1.88
1	94.00	5.69	4.25	3.75	2.50
1-1/8~1-1/4	175.00	6.25	4.50	4.31	2.75

- Forged Carbon Steel Bodies
- Alloy Pins
- Heat Treated



Meets Federal Spec.  
RR-C-271, Type IV A  
Grade A, Class 2

### Screw Pin Anchor Shackles

Hot Dipped Galvanized

Trade Size (Inch)	Pin Diameter (Inch)	Width At Pin (Inch)	Width In Body (Inch)	Working Load Limit (Tons)	Weight Each (Lbs)
3/16	1/4	3/8	19/32	1/3	0.05
1/4	5/16	1/2	3/4	1/2	0.10
5/16	3/8	9/16	1	3/4	0.19
3/8	7/16	11/16	1-1/8	1	0.25
7/16	1/2	3/4	1-1/4	1-1/2	0.50
1/2	5/8	13/16	1-5/16	2	0.75
5/8	3/4	1-1/16	1-11/16	3-1/4	1.44
3/4	7/8	1-1/4	2	4-3/4	2.50
7/8	1	1-7/16	2-1/4	6-1/2	3.50
1	1-1/8	1-11/16	2-5/8	8-1/2	5.25
1-1/8	1-1/4	1-7/8	3	9-1/2	7.25
1-1/4	1-3/8	2	3-3/8	12	9.75
1-3/8	1-1/2	2-1/4	3-5/8	13-1/2	13.25
1-1/2	1-5/8	2-3/8	3-7/8	17	17.70
1-3/4	2	2-7/8	5	25	30.38
2	2-1/4	3-1/4	5-3/4	35	45.00
2-1/2	2-3/4	4-1/8	7-1/4	55	85.75
3	3-1/4	5	7-7/8	85	145.00



Meets Federal Spec.  
RR-C-271, Type IV A  
Grade A, Class 3

### Bolt Type Anchor Shackles

Hot Dipped Galvanized

Trade Size (Inch)	Pin Diameter (Inch)	Width At Pin (Inch)	Width In Body (Inch)	Working Load Limit (Tons)	Weight Each (Lbs)
1/2	5/8	13/16	1-5/16	2	0.75
5/8	3/4	1-1/16	1-11/16	3-1/4	1.44
3/4	7/8	1-1/4	2	4-3/4	2.50
7/8	1	1-7/16	2-1/4	6-1/2	3.50
1	1-1/8	1-11/16	2-5/8	8-1/2	5.25
1-1/8	1-1/4	1-7/8	3	9-1/2	7.25
1-1/4	1-3/8	2	3-3/8	12	11.50
1-3/8	1-1/2	2-1/4	3-5/8	13-1/2	15.00
1-1/2	1-5/8	2-3/8	3-7/8	17	18.70
1-3/4	2	2-7/8	5	25	30.38
2	2-1/4	3-1/4	5-3/4	35	45.00
2-1/2	2-3/4	4-1/8	7-1/4	55	85.75



- Forged Carbon Steel Bodies
- Alloy Pins
- Heat Treated



Meets Federal Spec.  
RR-C-271, Type IV B  
Grade A Class 2

### Screw Pin Chain Shackles

Hot Dipped Galvanized

Size (Inch)	Pin Diameter (Inch)	Inside Width at Pin (Inch)	Working Load Limit (Tons)	Approx Weight Each (Lbs)
1/4	5/16	1/2	1/2	0.11
5/16	3/8	9/16	3/4	0.17
3/8	7/16	11/16	1	0.28
7/16	1/2	3/4	1-1/2	0.43
1/2	5/8	13/16	2	0.59
5/8	3/4	1-1/16	3-1/4	1.25
3/4	7/8	1-1/4	4-3/4	2.63
7/8	1	1-7/16	6-1/2	3.16
1	1-1/8	1-11/16	8-1/2	4.75
1-1/8	1-1/4	1-7/8	9-1/2	6.75
1-1/4	1-3/8	2	12	9.06
1-3/8	1-1/2	2-1/4	13-1/2	11.63
1-1/2	1-5/8	2-3/8	17	15.95
1-3/4	2	2-7/8	25	26.75
2	2-1/4	3-1/4	35	42.30

- Forged Alloy Steel Bodies
- Alloy Pins
- Heat Treated



Meets Federal Spec.  
RR-C-271, Type IV A  
Grade B, Class 3

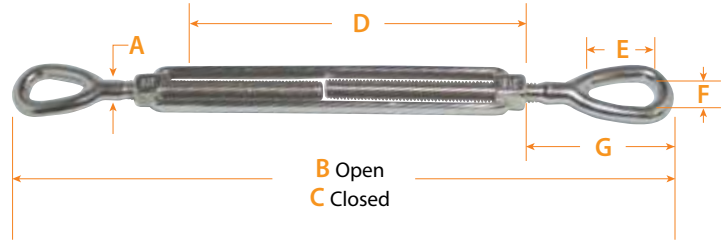
### All-Alloy Screw Pin Anchor Shackles

Hot Dipped Galvanized

Trade Size (Inch)	Pin Diameter (Inch)	Width at Pin (Inch)	Width in Body (Inch)	Working Load Limit (Tons)	Weight, Each (lbs.)
1/2	5/8	13/16	1 5/16	3.3	0.73
5/8	3/4	1 1/16	1 11/16	5	1.37
3/4	7/8	1 1/4	2	7	2.36
7/8	1	1 11/16	2 1/4	9.5	3.62
1	1 1/8	1 7/8	2 5/8	12.5	5.03
1 1/4	1 3/8	2	3 3/8	18	9.50

## Eye & Eye Turnbuckles

- Hot Dipped Galvanized
- Drop Forged C1035 Steel
- Heavy Hex Body
- 5:1 Safety Factor

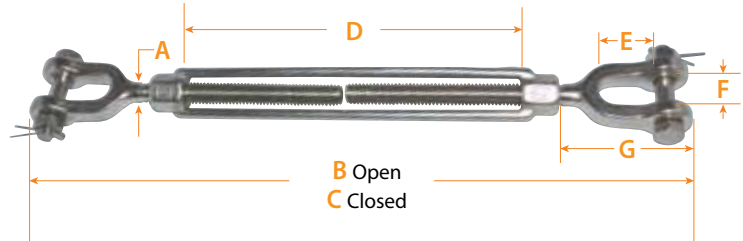


Meets Federal Spec. FF-T-791b, Type 1, Form 1, Class 4

Thread Dia X Take Up	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)						
			A	B Open	C Closed	D	E	F	G Closed
1/4 x 4	500	0.30	0.25	12.25	8.25	4.00	0.78	0.34	1.75
5/16 x 4-1/2	800	0.47	0.31	14.12	9.62	4.50	0.94	0.44	2.09
3/8 x 6	1,200	0.75	0.38	18.16	12.16	6.00	1.12	0.53	2.52
1/2 x 6	2,200	1.60	0.50	19.96	13.96	6.00	1.44	0.72	3.23
1/2 x 9	2,200	1.83	0.50	25.96	16.96	9.00	1.44	0.72	3.23
1/2 x 12	2,200	2.08	0.50	31.96	19.96	12.00	1.44	0.72	3.23
5/8 x 6	3,500	2.75	0.63	21.68	15.68	6.00	1.75	0.88	3.90
5/8 x 9	3,500	3.13	0.63	27.68	18.68	9.00	1.75	0.88	3.90
5/8 x 12	3,500	3.50	0.63	33.68	21.68	12.00	1.75	0.88	3.90
3/4 x 6	5,200	3.89	0.75	23.62	17.62	6.00	2.09	1.00	4.69
3/4 x 9	5,200	4.61	0.75	29.62	20.62	9.00	2.09	1.00	4.69
3/4 x 12	5,200	5.43	0.75	35.62	23.62	12.00	2.09	1.00	4.69
3/4 x 18	5,200	7.25	0.75	47.62	29.62	18.00	2.09	1.00	4.69
7/8 x 12	7,200	8.10	0.88	36.82	24.82	12.00	2.38	1.25	5.10
7/8 x 18	7,200	9.95	0.88	48.82	30.82	18.00	2.38	1.25	5.10
1 x 6	10,000	9.33	1.00	27.72	21.72	6.00	3.00	1.44	6.36
1 x 12	10,000	11.93	1.00	39.97	27.72	12.00	3.00	1.44	6.36
1 x 18	10,000	14.00	1.00	51.72	33.72	18.00	3.00	1.44	6.36
1 x 24	10,000	17.25	1.00	63.72	39.72	24.00	3.00	1.44	6.36
1-1/4 x 12	15,200	19.00	1.25	42.56	30.56	12.00	3.56	1.81	7.72
1-1/4 x 18	15,200	23.00	1.25	54.56	36.56	18.00	3.56	1.81	7.72
1-1/4 x 24	15,200	27.00	1.25	66.56	42.56	24.00	3.56	1.81	7.72
1-1/2 x 12	21,400	27.50	1.50	45.00	33.00	12.00	4.06	2.12	8.62
1-1/2 x 18	21,400	31.00	1.50	57.00	39.00	18.00	4.06	2.12	8.62
1-1/2 x 24	21,400	37.50	1.50	69.00	45.34	24.00	4.06	2.12	8.62
1-3/4 x 18	28,000	52.50	1.75	60.38	42.38	18.00	4.62	2.38	10.00
1-3/4 x 24	28,000	58.00	1.75	72.38	48.38	24.00	4.62	2.38	10.00
2 x 24	37,000	85.25	2.00	79.19	55.19	24.00	5.75	2.69	13.09
2-1/2 x 24	60,000	144.25	2.50	82.62	58.62	24.00	6.50	3.12	13.78
2-3/4 x 24	75,000	194.00	2.75	85.50	61.50	24.00	7.00	3.25	15.22

## Jaw & Jaw Turnbuckles

- Hot Dipped Galvanized
- Drop Forged C1035 Steel
- Heavy Hex Body
- 5:1 Safety Factor



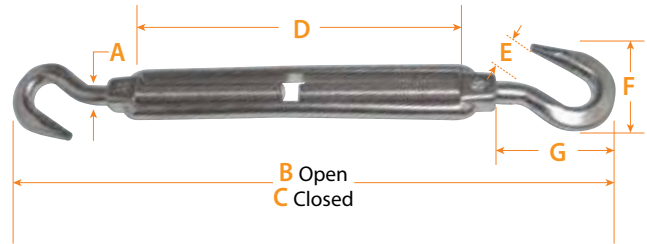
Meets Federal Spec. FF-T-791b, Type 1, Form 1, Class 7

Thread Dia X Take Up	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)						
			A	B Open	C Closed	D	E	F	G Closed
1/4 x 4	500	0.30	0.25	12.07	8.07	4.00	0.62	0.45	1.58
5/16 x 4-1/2	800	0.50	0.31	14.01	9.51	4.50	0.87	0.50	1.98
3/8 x 6	1,200	0.80	0.38	17.77	11.77	6.00	0.87	0.54	2.12
1/2 x 6	2,200	1.51	0.50	20.48	13.48	6.00	1.06	0.55	2.75
1/2 x 9	2,200	1.71	0.50	26.48	16.48	9.00	1.06	0.55	2.75
1/2 x 12	2,200	2.08	0.50	32.48	19.48	12.00	1.06	0.55	2.75
5/8 x 6	3,500	2.35	0.63	22.53	15.28	6.00	1.31	0.82	3.50
5/8 x 9	3,500	3.17	0.63	28.53	18.28	9.00	1.31	0.82	3.50
5/8 x 12	3,500	3.61	0.63	34.53	21.28	12.00	1.31	0.82	3.50
3/4 x 6	5,200	4.00	0.75	24.61	17.11	6.00	1.50	1.03	4.18
3/4 x 9	5,200	4.75	0.75	30.61	20.11	9.00	1.50	1.03	4.18
3/4 x 12	5,200	5.93	0.75	36.61	23.11	12.00	1.50	1.03	4.18
3/4 x 18	5,200	7.00	0.75	48.61	29.11	18.00	1.50	1.03	4.18
7/8 x 12	7,200	8.36	0.88	38.32	24.57	12.00	1.75	1.23	4.85
7/8 x 18	7,200	9.75	0.88	50.32	30.57	18.00	1.75	1.23	4.85
1 x 6	10,000	8.92	1.00	28.89	20.89	6.00	2.06	1.31	5.53
1 x 12	10,000	11.20	1.00	40.89	26.89	12.00	2.06	1.31	5.53
1 x 18	10,000	13.30	1.00	52.89	32.89	18.00	2.06	1.31	5.53
1 x 24	10,000	17.00	1.00	64.89	38.89	24.00	2.06	1.31	5.53
1-1/4 x 12	15,200	19.42	1.25	44.55	30.05	12.00	2.81	1.86	7.21
1-1/4 x 18	15,200	24.18	1.25	56.05	36.05	18.00	2.81	1.86	7.21
1-1/4 x 24	15,200	28.50	1.25	68.55	42.05	24.00	2.81	1.86	7.21
1-1/2 x 12	21,400	28.99	1.50	47.25	32.25	12.00	2.81	2.25	7.88
1-1/2 x 18	21,400	35.00	1.50	59.25	38.25	18.00	2.81	2.25	7.88
1-1/2 x 24	21,400	39.18	1.50	71.25	44.25	24.00	2.81	2.25	7.88
1-3/4 x 18	28,000	53.75	1.75	59.78	41.78	18.00	3.38	2.60	9.40
1-3/4 x 24	28,000	60.68	1.75	71.78	47.78	24.00	3.38	2.60	9.40
2 x 24	37,000	89.00	2.00	77.95	53.95	24.00	3.69	2.62	11.86
2-1/2 x 24	60,000	150.00	2.50	82.40	58.40	24.00	4.44	3.06	13.56
2-3/4 x 24	75,000	183.00	2.75	85.50	61.50	24.00	4.19	3.68	15.22



## Hook & Hook Turnbuckles

- Hot Dipped Galvanized
- Drop Forged C1035 Steel
- Heavy Hex Body
- 5:1 Safety Factor



Thread Dia X Take Up	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)						
			A	B Open	C Closed	D	E	F	G Closed
1/4 x 4	400	0.29	0.25	12.09	8.09	4.00	0.45	1.27	1.75
5/16 x 4-1/2	700	0.49	0.31	13.47	9.47	4.50	0.50	1.50	2.09
3/8 x 6	1,000	0.78	0.38	17.94	11.94	6.00	0.56	1.77	2.52
1/2 x 6	1,500	1.61	0.50	20.67	13.67	6.00	0.66	2.28	3.23
1/2 x 12	1,500	2.26	0.50	32.67	19.67	12.00	0.66	2.28	3.23
5/8 x 6	2,250	2.70	0.63	22.72	15.47	6.00	0.90	2.81	3.90
5/8 x 12	2,250	3.78	0.63	34.72	21.47	12.00	0.90	2.81	3.90
3/4 x 6	3,000	3.89	0.75	24.95	17.45	6.00	0.98	3.33	4.69
3/4 x 12	3,000	5.83	0.75	36.95	23.45	12.00	0.98	3.33	4.69
3/4 x 18	3,000	6.33	0.75	48.95	29.45	18.00	0.98	3.33	4.69
7/8 x 12	4,000	8.10	0.88	38.66	24.91	12.00	1.13	3.78	5.10
1 x 12	5,000	11.93	1.00	41.20	27.20	12.00	1.25	4.25	6.36

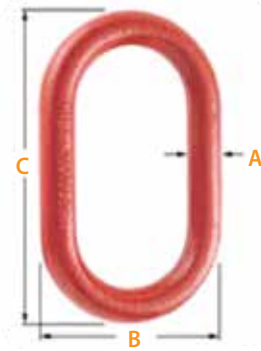
### OTHER COMBINATIONS ARE AVAILABLE

NOTE: Using a hook in any combination reduces the strength by 50%



# FORGED WELDLESS LINKS

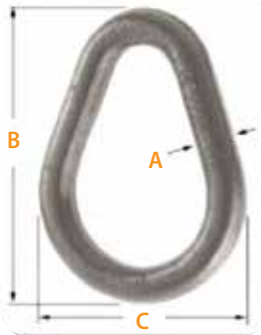
- Drop Forged
- Heat Treated
- 5:1 Safety Factor



## Oblong Master Links

Alloy Steel, Painted

Size "A" (Inch)	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)	
			B	C
1/2	7,000	0.82	2.50	5.00
5/8	9,000	1.52	3.00	6.00
3/4	12,300	2.07	2.75	5.50
7/8	15,000	3.50	3.75	6.38
1	24,360	4.85	3.50	7.00
1-1/4	36,200	9.57	4.38	8.75
1-1/2	54,300	16.22	5.25	10.50
1-3/4	84,900	25.22	6.00	12.00
2	102,600	37.04	7.00	14.00



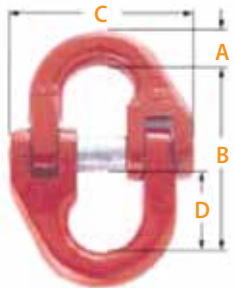
## Pear Shaped Sling Link

Carbon Steel, Hot Dip Galvanized

Size "A" (Inch)	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)	
			B	C
3/8	1,800	0.23	1.13	0.75
1/2	2,900	0.55	1.50	1.00
5/8	4,200	1.06	1.87	1.25
3/4	6,000	1.88	2.25	1.50
7/8	8,300	2.75	2.63	1.75
1	10,800	4.35	3.00	2.00
1-1/4	16,750	7.60	4.00	2.50
1-3/8	20,500	11.30	4.13	2.75

## Alloy Coupling Links

Designed for use with Grade 80 or 100 chain.



Chain Size (Inch)	Weight per Each (Lbs)	Grade 80	Grade 100	Dimensions (Inch)			
				A	B	C	D
9/32 (1/4)	0.29	3,500	4,300	0.36	1.88	0.78	0.66
5/16	0.67	4,500	5,700	0.36	2.18	0.91	0.69
3/8	0.76	7,100	8,800	0.45	2.53	1.03	0.88
1/2	1.06	12,000	15,000	0.64	3.44	1.44	1.13
5/8	2.43	18,100	22,600	0.75	4.13	1.73	1.41
3/4	4.20	28,300	35,300	0.93	4.92	2.03	1.63
7/8	6.80	34,200	42,700	1.06	5.46	2.27	2.00
1	11.03	47,700	59,700	1.22	5.98	2.44	2.25
1-1/4	20.38	72,300	90,400	1.50	7.43	3.07	2.56



### Eye Hoist Hooks

Alloy Steel (Painted), Carbon (HDG), Drop Forged

Size Alloy (Tons)	Size Carbon (Tons)	Eye Diameter (Inch)	Throat Opening w/Latch (Inch)	Weight per Each (Lbs)
1	3/4	3/4	7/8	0.50
1-1/2	1	29/32	31/32	0.75
2	1-1/2	1-1/8	1	1.00
3	2	1-1/4	1-1/8	1.70
4-1/2	3	1-9/16	1-11/32	3.60
7	5	2	1-11/16	7.50
11	7-1/2	2-7/16	2-1/16	13.00
15	10	2-27/32	2-1/4	18.50
22	15	3-1/2	3	33.80

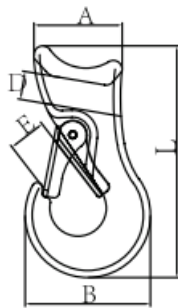
### Swivel Hoist Hooks

Painted



Size Alloy (Tons)	Size Carbon (Tons)	Inside Ball Width (Inch)	Throat Opening w/Latch (Inch)	Weight per Each (Lbs)
1	3/4	1-1/4	7/8	0.78
1-1/2	1	1-1/2	31/32	1.32
2	1-1/2	1-3/4	1	2.02
3	2	1-3/4	1-1/8	2.57
4-1/2	3	2	1-11/32	4.89
7	5	2-1/2	1-11/16	10.29
11	7-1/2	2-3/4	2-1/16	18.62
15	10	3-1/8	2-1/4	25.43
22	15	4	3	44.00

Swivel hooks are intended for positioning and not intended for rotation under load.  
\*Carbon Hooks are HDG



### G80 Sliding Choker Hook

Painted

Item No	Weight/kg	WLL/T	B.L/T	D± 0.5	A± 1.5	B± 1.5	E± 2	L± 3
3/8-1/2	.68	1.6	8	17	50	71	21	132
5/8	1.21	2	10	22	63.5	79	23	151.5
3/4	1.99	3	15	28	69	103	29	170
1	4.18	5	25	32.5	85.7	135	38	213

Ultimate load is 4 times the Working Load Limit



### Sorting Hooks

Painted

Working Load Limit at Tip of Hook (Tons)	Weight per Each (Lbs)	Working Load Limit (Lbs)	Dimensions (Inch)			
			I.D. of Eye	Overall Length	Opening at top of Hook	Radius at bottom of Hook
2	7-1/2	6.25	1.38	9.70	2.80	0.625

# CHAIN HOOKS

- G43 and G70, Drop Forged
- Not Recommended for overhead lifting
- Grade 43 hooks are electro-galvanized
- Grade 70 hooks are yellow dichromate



## Clevis Grab Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G - 43	G - 70	
1/4	2,600	3,150	0.40
5/16	3,900	5,400	0.79
3/8	5,400	6,600	1.00
7/16	7,200	8,750	1.50
1/2	9,200	11,300	2.10
5/8	13,000	15,800	4.20



## Eye Grab Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G - 43	G - 70	
1/4	2,600	3,150	0.40
5/16	3,900	5,400	0.75
3/8	5,400	6,600	1.20
7/16	7,200	8,750	1.50
1/2	9,200	11,300	2.10
5/8	13,000	15,800	4.40



## Clevis Slip Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G - 43	G - 70	
1/4	2,600	3,150	0.43
5/16	3,900	5,400	0.72
3/8	5,400	6,600	1.03
7/16	7,200	8,750	1.64
1/2	9,200	11,300	2.45
5/8	13,000	15,800	4.70



## Eye Slip Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G - 43	G - 70	
1/4	2,600	3,150	0.43
5/16	3,900	5,400	0.72
3/8	5,400	6,600	1.03
7/16	7,200	8,750	1.64
1/2	9,200	11,300	2.45
5/8	13,000	15,800	4.70

# CHAIN HOOKS – ALLOY

- Grade 80 and 100, Drop Forged
- Grade 80 and 100 hooks are painted



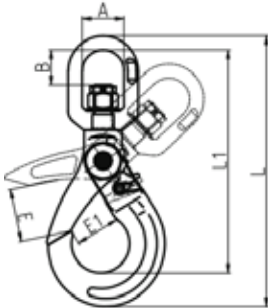
## Clevis Grab Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G-80	G-100	
3/8	7,100	8,800	1.00
1/2	12,000	15,000	2.10
5/8	18,000	22,600	4.20



## Clevis Slip Hooks

Chain Size (Inch)	Working Load Limits (Lbs)		Weight per Each (Lbs)
	G-80	G-100	
3/8	7,100	8,800	1.00
1/2	12,000	15,000	2.10
5/8	18,000	22,600	4.20



## G80 Swivel Selflock Hook

Painted

Item No	Weight/kg	WLL/T	BL/T	A±1	B±1	E±2	E1±2	L1±3	L±3
7-8	1.15	2	8	36	29.5	40	35.8	189	228
10-8	1.86	3.15	12.6	42	35	50	48	224	270
13-8	3.51	5.3	21.2	50	41	60	52.5	267	324

Ultimate load is 4 times the Working Load Limit

Swivel hooks are intended for positioning and not intended for rotating under load.

- Ultimate Load is 5 Times the Working Load Limit.
- Working Load Limit applies to straight, inline pulls only.

### Shoulder Nut Eye Bolts

Hot Dipped Galvanized / Drop Forged



Shank Diameter X Shank Length (Inch)	Thread Length (Inch)	Eye Diameter (Inch)		Working Load Limit (Lbs)	Approx. Weight per 100 (Lbs)
		I.D.	O.D.		
1/4 x 2	1.50	0.50	0.88	650	6.60
1/4 x 4	2.50	0.50	0.88	650	9.10
5/16 x 2-1/4	1.50	0.62	1.12	1,200	12.50
5/16 x 4-1/4	2.50	0.62	1.12	1,200	18.80
3/8 x 2-1/2	1.50	0.75	1.38	1,550	21.40
3/8 x 4-1/2	2.50	0.75	1.38	1,550	25.30
1/2 x 3-1/4	1.50	1.00	1.75	2,600	42.60
1/2 x 6	3.00	1.00	1.75	2,600	56.80
5/8 x 4	2.00	1.25	2.25	5,200	68.60
5/8 x 6	3.00	1.25	2.25	5,200	102.40
3/4 x 4-1/2	2.00	1.50	2.75	7,200	144.50
3/4 x 6	3.00	1.50	2.75	7,200	167.50
7/8 x 5	2.50	1.75	3.25	10,600	225.00
1 x 6	3.00	2.00	3.75	13,300	366.30
1 x 9	4.00	2.00	3.75	13,300	422.50
1-1/4 x 8	4.00	2.50	4.50	21,000	650.00
1-1/4 x 12	4.00	2.50	4.50	21,000	795.00
1-1/2 x 15	6.00	3.00	5.50	24,000	1,425.00

### Machinery Eye Bolts

Electro Galvanized for Storage Purposes / Drop Forged



Shank Diameter X Shank Length (Inch)	Thread Number	Thread Length (Inch)	Eye Diameter (Inch)		Working Load Limit (Lbs)	Approx. Weight per 100 (Lbs)
			I.D.	O.D.		
1/4 x 1	21	1.00	0.75	1.13	650	5
5/16 x 1-1/8	22	1.12	0.88	1.38	1,200	9
3/8 x 1-1/4	23	1.25	1.00	1.62	1,550	15
7/16 x 1-3/8	24	1.37	1.09	1.84	2,000	21
1/2 x 1-1/2	25	1.50	1.19	1.95	2,600	28
9/16 x 1-5/8	26	1.62	1.28	2.28	3,200	35
5/8 x 1-3/4	27	1.75	1.38	2.38	5,200	55
3/4 x 2	28	2.00	1.50	2.76	7,200	96
7/8 x 2-1/4	29	2.25	1.75	3.25	10,600	154
1 x 2-1/2	30	2.50	2.00	3.76	13,300	218
1-1/4 x 3	31	3.00	2.50	4.50	21,000	380
1-1/2 x 3-1/2	32	3.50	2.50	5.18	24,000	700

# EYE BOLTS

- Ultimate Load is 5 Times the Working Load Limit.
- Working Load Limit applies to straight, inline pulls only.

## Regular Nut Eye Bolts

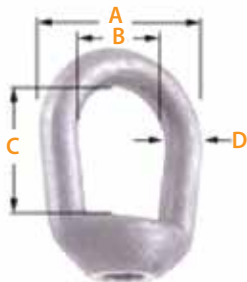
Hot Dipped Galvanized / Drop Forged



Shank Diameter X Shank Length (Inch)	Thread Length (Inch)	Eye Diameter (Inch)		Working Load Limit (Lbs)	Approx. Weight per 100 (Lbs)
		I.D.	O.D.		
1/4 x 2	1.50	0.50	1.00	650	6.00
1/4 x 4	2.50	0.50	1.00	650	13.50
5/16 x 2-1/4	1.50	0.62	1.25	1,200	18.75
5/16 x 4-1/4	2.50	0.62	1.25	1,200	25.00
3/8 x 2-1/2	1.50	0.75	1.50	1,550	24.33
3/8 x 4-1/2	2.50	0.75	1.50	1,550	37.50
3/8 x 6	2.50	0.75	1.50	1,550	43.75
1/2 x 3-1/4	1.50	1.00	2.00	2,600	50.00
1/2 x 6	3.00	1.00	2.00	2,600	62.50
1/2 x 8	3.00	1.00	2.00	2,600	75.00
1/2 x 10	3.00	1.00	2.00	2,600	88.00
1/2 x 12	3.00	1.00	2.00	2,600	100.00
5/8 x 4	2.00	1.25	2.50	5,200	101.25
5/8 x 6	3.00	1.25	2.50	5,200	120.00
5/8 x 8	3.00	1.25	2.50	5,200	131.00
5/8 x 10	3.00	1.25	2.50	5,200	162.50
5/8 x 12	4.00	1.25	2.50	5,200	175.00
3/4 x 4-1/2	2.00	1.50	3.00	7,200	168.60
3/4 x 6	3.00	1.50	3.00	7,200	184.50
3/4 x 8	3.00	1.50	3.00	7,200	200.00
3/4 x 10	3.00	1.50	3.00	7,200	237.50
3/4 x 12	4.00	1.50	3.00	7,200	251.94
3/4 x 15	5.00	1.50	3.00	7,200	300.00
7/8 x 5	2.50	1.75	3.50	10,600	275.00
7/8 x 8	4.00	1.75	3.50	10,600	325.00
7/8 x 12	4.00	1.75	3.50	10,600	400.00
1 x 6	3.00	2.00	4.00	13,300	425.00
1 x 9	4.00	2.00	4.00	13,300	452.00
1 x 12	4.00	2.00	4.00	13,300	550.00
1 x 18	7.00	2.00	4.00	13,300	650.00

## Eye Nuts

Hot Dipped Galvanized / Drop Forged

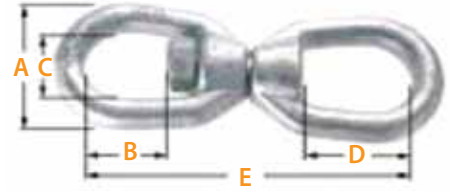


Trade Size	Tap Size	Working Load Limit (Lbs)	Weight per Each (Lbs)	Dimensions (Inch)			
				A	B	C	D
1	1/4~20	520	0.09	1.25	0.75	1.00	0.25
2	3/8~16	1,250	0.17	1.62	1.00	1.20	0.31
3A	1/2~13	2,250	0.28	2.00	1.25	1.44	0.38
4	5/8~11	3,600	0.60	2.50	1.50	1.92	0.50
5	3/4~10	5,200	1.00	3.00	1.75	2.28	0.63
6	7/8~9	7,200	1.65	3.50	2.00	2.50	0.75
7	1~8	10,000	2.69	4.00	2.25	2.92	0.88
8	1-1/4~7	15,500	3.87	4.50	2.50	3.35	1.00
9	1-3/8~6	18,500	5.00	5.00	2.75	4.00	1.13

# DROP FORGED SWIVELS

## Eye & Eye Swivels

- Hot Dipped Galvanized
- Meets Federal Spec. RR-C-271 Type VII, Class 1



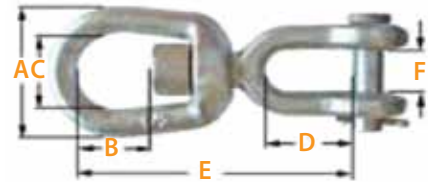
Size	Weight per Each (Lbs)	Working Load Limit (Lbs)	Dimensions (Inch)				
			A	B	C	D	E
1/4	0.21	850	1-1/4	11/16	3/4	1-1/16	2-15/16
5/16	0.39	1,250	1-5/8	13/16	1	1-1/4	3-9/16
3/8	0.69	2,250	2	15/16	1-1/4	1-1/2	4-5/16
1/2	1.43	3,600	2-1/2	1-5/16	1-1/2	2	5-7/16
5/8	2.50	5,200	3	1-9/16	1-3/4	2-3/8	6-9/16
3/4	4.13	7,200	3-1/2	1-3/4	2	2-5/8	7-3/16
7/8	4.25	10,000	4	2-1/16	2-1/4	3-1/16	8-3/8
1	9.00	12,500	4-1/4	2-5/16	2-1/2	3-1/2	9-5/8
1-1/8	12.46	15,200	5	2-3/8	2-3/4	3-3/4	10-3/8
1-1/4	16.76	18,000	5-5/8	2-11/16	3-1/8	3-11/16	11-1/8
1-1/2	45.79	45,200	7	4-3/16	4	4-3/16	17-1/8

Ultimate Load is 5 Times the Working Load Limit.

Swivels are positioning devices and are not intended to rotate under load.

## Eye & Jaw Swivels

- Hot Dipped Galvanized
- Meets Federal Spec. RR-C-271 Type VII, Class 3



Size	Weight per Each (Lbs)	Working Load Limit (Lbs)	Dimensions (Inch)					
			A	B	C	D	E	F
1/4	0.25	850	1-1/4	11/16	3/4	7/8	2-5/8	15/32
5/16	0.39	1,250	1-5/8	13/16	1	7/8	2-15/16	1/2
3/8	0.70	2,250	2	15/16	1-1/4	1-1/16	3-5/8	5/8
1/2	1.43	3,600	2-1/2	1-5/16	1-1/2	1-5/16	4-1/2	3/4
5/8	2.50	5,200	3	1-9/16	1-3/4	1-1/2	5-5/16	15/16
3/4	4.13	7,200	3-1/2	1-3/4	2	1-3/4	6-1/16	1-1/8
7/8	5.75	10,000	4	2-1/16	2-1/4	2-1/16	7	1-3/16
1	10.25	12,500	4-1/4	2-5/16	2-1/2	2-13/16	8-9/16	1-3/4
1-1/8	12.46	15,200	5	2-3/8	2-3/4	2-13/16	8-16/16	1-3/4
1-1/4	15.75	18,000	5-5/8	2-11/16	3-1/8	2-13/16	9-7/16	2-1/16
1-1/2	54.75	45,200	7	4-3/16	4	4-7/16	14-3/4	2-7/8

Ultimate Load is 5 Times the Working Load Limit.





### Drop Side Snatch w/Swivel Hook

Painted

Part #	Size (Inch)	Working Load Limit (Tons)	Wire Size (Inch)	Weight (Lbs)
BLK3HK	3	2	3/8	5
BLK4.1/2HK	4-1/2	4	1/2	12
BLK6HK	6	8	3/4	27
BLK8HK	8	8	5/8-3/4	33
BLK10HK	10	8	5/8-3/4	41
BLK16HK	16	15	3/4-7/8	130

Bronze Brushed with Pressure Grease Fittings Painted



### Drop Side Snatch w/Swivel Shackle

Painted

Part #	Size (Inch)	Working Load Limit (Tons)	Wire Size (Inch)	Weight (Lbs)
BLK3SH	3	2	5/16-3/8	5
BLK4.1/2SH	4-1/2	4	3/8-1/2	12
BLK6SH	6	8	5/8-3/4	28
BLK8SH	8	8	5/8-3/4	34
BLK10SH	10	8	5/8-3/4	42
BLK16SH	16	15	3/4-7/8	135

Bronze Brushed with Pressure Grease Fittings



### Yarding Blocks

Hot Dip Galvanized

Block Size (Inch)	Type	Working Load Limit (Tons)
3	Grease Fitting	1.5
4	Grease Fitting	3

### Wood Shell Block

Single Sheave With Hook

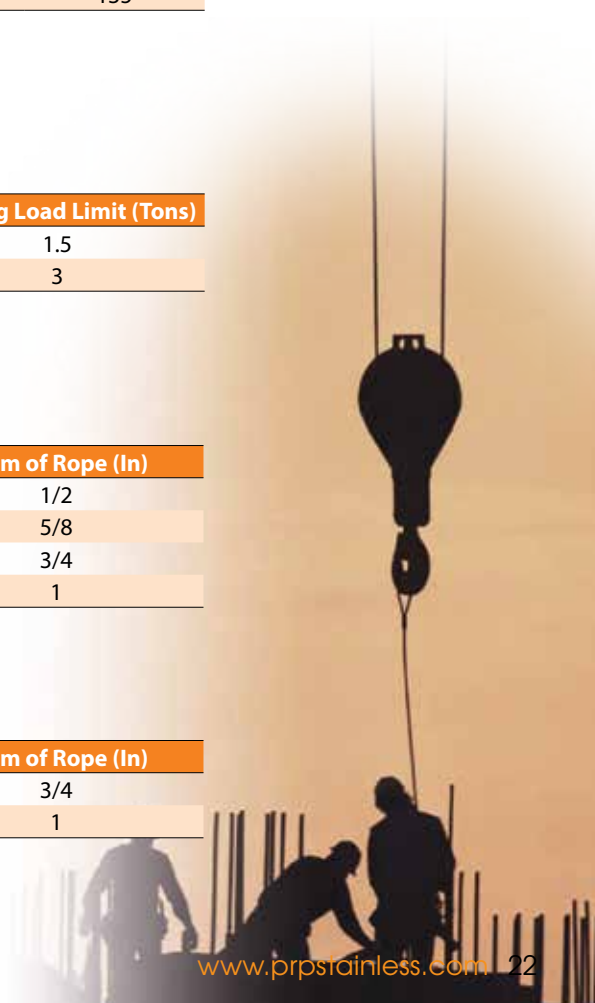
Size (In)	S.W.L (Lbs)	Diam of Rope (In)
4	1000	1/2
5	1200	5/8
6	1800	3/4
8	2800	1



### Wood Shell Block

Double Sheave With Hook

Size (In)	S.W.L (Lbs)	Diam of Rope (In)
6	2500	3/4
8	3800	1



- Self Colored
- Zinc Plated
- Hot Dipped Galvanized



### G30 Proof Coil Chain - NACM

Chain Size (Inches)	Working Load Limit (Lbs)	Minimum Breaking Strength (Lbs)	Minimum Inside Width (Inches)	Maximum Inside Length (Inches)	Feet Per Drum	Approx Weight per 100ft (lbs)
1/8	400	1,600	0.25	0.94	2,500	20
3/16	800	3,200	0.30	0.98	1,600	40
1/4	1,300	5,200	0.38	1.24	800	66
5/16	1,900	7,600	0.44	1.29	550	86
3/8	2,650	10,600	0.55	1.38	400	142
1/2	4,500	18,000	0.72	1.79	200	242
5/8	6,900	27,600	0.79	2.20	150	357
3/4	10,600	42,400	0.98	2.76	100	560
7/8	12,800	51,200	1.08	3.03	100	675
1	17,900	71,600	1.25	3.58	100	924

Not Designed for Overhead Lifting

### G30 Proof Coil Chain - NACM

- PAILS

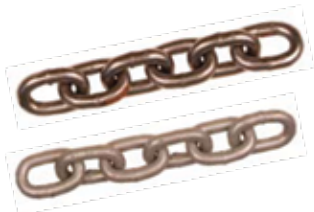


Chain Size (Inches)	Working Load Limit (Lbs)	Minimum Breaking Strength (Lbs)	Minimum Inside Width (Inches)	Maximum Inside Length (Inches)	Feet Per Drum	Approx Weight per 100ft (lbs)
1/8	400	1,600	0.25	0.94	2,500	20
3/16	800	3,200	0.30	0.98	1,600	40
1/4	1,300	5,200	0.38	1.24	800	66
5/16	1,900	7,600	0.44	1.29	550	86
3/8	2,650	10,600	0.55	1.38	400	142

Not Designed for Overhead Lifting

### G43 High Test Chain - NACM

- Self Colored
- Hot Dipped Galvanized



Chain Size (Inches)	Working Load Limit (Lbs)	Minimum Breaking Strength (Lbs)	Minimum Inside Width (Inches)	Maximum Inside Length (Inches)	Feet Per Drum	Approx Weight per 100ft (lbs)
1/4	2,600	7,800	0.38	1.24	800	66
5/16	3,900	11,700	0.44	1.29	550	86
3/8	5,400	16,200	0.55	1.38	400	142
1/2	9,200	27,600	0.72	1.79	200	242
5/8	13,000	39,000	0.79	2.20	150	357
3/4	20,200	60,600	0.98	2.76	100	560
7/8	24,500	73,500	1.08	3.03	80	675

Not Designed for Overhead Lifting.

Some sizes available in ASTM - Hot dipped galvanized.

### G70 Transport Chain - NACM

- Yellow Zinc
- Dichromate Finish



Chain Size (Inches)	Working Load Limit (Lbs)	Minimum Breaking Strength (Lbs)	Minimum Inside Width (Inches)	Maximum Inside Length (Inches)	Feet Per Drum	Approx Weight per 100ft (lbs)
1/4	3,150	12,600	0.38	1.24	800	66
5/16	4,700	18,800	0.44	1.29	550	86
3/8	6,600	26,400	0.55	1.38	400	142
1/2	11,300	45,200	0.72	1.79	200	242
5/8	15,800	63,200	0.79	2.20	150	357
3/4	24,700	98,800	0.98	2.76	100	560

Not Designed for Overhead Lifting

### G80 And G100 Alloy Chain - NACM

- Black Finish



Chain Size (Inches)	Working Load Limit (Lbs) G80	Working Load Limit (Lbs) G100	Minimum Inside Width (Inches)	Maximum Inside Length (Inches)	Minimum Weight per 100ft (Lbs)
5/16	4,500	5,700	0.050	1.100	92
3/8	7,100	8,800	0.650	1.333	127
1/2	12,000	15,000	0.845	1.560	226
5/8	18,100	22,600	0.975	1.820	365
3/4	28,300	35,300	1.170	2.080	520
7/8	34,200	42,700	1.300	2.340	720
1	47,700	59,700	1.430	2.800	925
1-1/4	72,300	90,400	2.048	3.705	1,465

Grades 80 and 100 are Certified and Intended for Overhead Lifting



### Forged Lever Load Binders

Painted

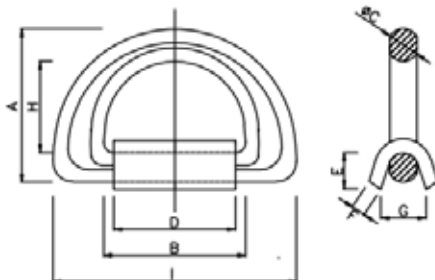
Size (Inch)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	Weight per Each (Lbs)	Take Up (Inch)
1/4	2,600	9,100	3.10	2-1/2
5/16 - 3/8	5,400	19,000	8.25	3-3/4
3/8 - 1/2	9,200	27,600	11.50	4
1/2 - 5/8	11,500	34,500	12.70	4-1/4



### Forged Ratchet Load Binders

Painted

Size (Inch)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	Weight per Each (Lbs)	Take Up (Inch)
1/4	2,200	7,800	3.50	4
5/16 - 3/8	5,400	19,000	11.23	8
3/8 - 1/2	9,200	33,000	12.83	8
1/2 - 5/8	13,000	46,000	14.55	8



### WELD-ON D-RINGS AND STRAPS

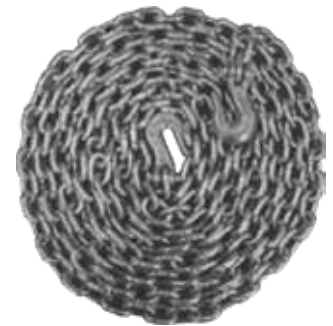
Specifications	Size (mm)								
	A	B	C	D	E	F	G	H	I
10T	87	90	18	80	24	10	42	50	137
20T	87	90	18	80	24	10	42	50	137
25T	109	112	20	90	25	10	48	69	170
30T	102	88	21	80	24	10	42	58	144
36T	124	130	23	120	29	12	45	76	208
41T	137	143	26	120	48	12	50	87	225
50T	140	137	27	115	48	12	50	86	227
67T	151	139	27	135	37	14	52	90	240



### G70 Binder Chain

Gold Chromate

Size (Inch)	ASTM 80			NACM 96			Pcs per Drum
	Weight per Each (Lbs)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	Weight per Each (Lbs)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	
5/16 x 20	23.10	4,700	18,800	22.00	4,700	18,800	25
5/16 x 25	28.60	4,700	18,800	26.40	4,700	18,800	20
3/8 x 14	23.10	6,600	26,400	22.00	6,600	26,400	25
3/8 x 16	26.40	6,600	26,400	25.30	6,600	26,400	25
3/8 x 20	33.00	6,600	26,400	31.90	6,600	26,400	20
3/8 x 25	40.70	6,600	26,400	39.60	6,600	26,400	20



### G43 Binder Chain

Self Colored

Size (Inch)	ASTM 80			NACM 96			Pcs per Drum
	Weight per Each (Lbs)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	Weight per Each (Lbs)	Working Load Limit (Lbs)	Breaking Strength (Lbs)	
5/16 x 20	23.10	3,200	11,600	20.90	3,900	11,600	25
5/16 x 25	28.60	3,200	11,600	26.40	3,900	11,600	20
3/8 x 14	23.10	4,450	16,200	22.00	5,400	16,200	25
3/8 x 16	26.40	4,450	16,200	25.30	5,400	16,200	25
3/8 x 20	33.00	4,450	16,200	29.70	5,400	16,200	20
3/8 x 25	40.70	4,450	16,200	38.50	5,400	16,200	20





### EG Quick Link

Not for Overhead Lifting

Diameter (Inch)	Working Load Limit (Lbs)	Weight per Each (Lbs)
1/8	275	0.03
3/16	400	0.05
1/4	880	0.08
5/16	1,700	0.18
3/8	2,100	0.30
1/2	2,500	0.52



### EG Universal Spring Snap Link

Not for Overhead Lifting

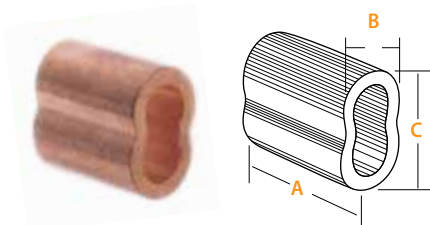
Diameter (Inch)	Working Load Limit (Lbs)	Weight per Each (Lbs)
1/8	80	0.03
3/16	120	0.04
1/4	180	0.06
5/16	280	0.15
3/8	400	0.27
1/2	900	0.78

# SWAGE SLEEVES AND STOPS

- Zinc Plated
- Zinc Plated Copper
- Aluminum
- Plain Copper

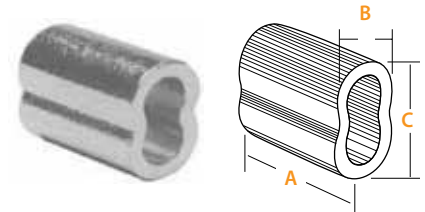
## Copper Oval Sleeves

Includes Zinc Plated



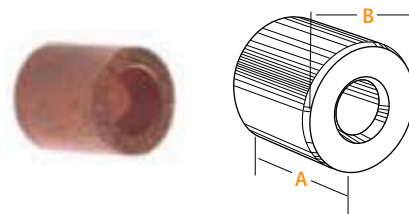
For Cable Diameter	Weight per 100pcs (Lbs)	Dimensions (Inch)		
		A	B	C
1/32	0.50	0.248	0.086	0.129
3/64	0.17	0.390	0.134	0.201
1/16	0.26	0.390	0.170	0.251
3/32	0.53	0.400	0.224	0.369
1/8	1.57	0.575	0.324	0.429
5/32	2.24	0.625	0.365	0.592
3/16	5.12	1.000	0.449	0.671
7/32	4.45	0.875	0.461	0.713
1/4	7.87	1.138	0.515	0.810
3/8	14.76	1.312	0.727	1.110
1/2	37.70	1.900	0.965	1.480

## Aluminum Oval Sleeves



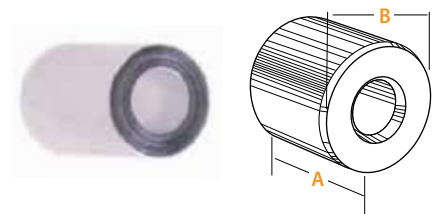
For Cable Diameter	Weight per 100pcs (Lbs)	Dimensions (Inch)		
		A	B	C
3/64	0.05	0.375	0.133	0.198
1/16	0.09	0.375	0.172	0.250
3/32	0.32	0.500	0.281	0.406
1/8	0.64	0.625	0.344	0.500
5/32	0.80	0.688	0.375	0.562
3/16	1.55	1.060	0.500	0.750
7/32	2.22	0.875	0.461	0.713
1/4	2.52	1.125	0.536	0.812
5/16	4.50	1.250	0.750	1.156
1/2	17.60	2.000	1.60	1.625

## Copper Stop Sleeves

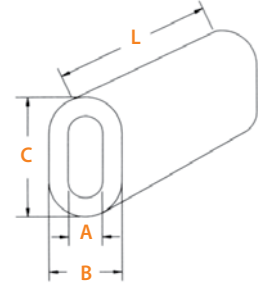


For Cable Diameter	Weight per 100pcs (Lbs)	Dimensions (Inch)	
		A	B
3/64	0.14	0.218	0.203
1/16	0.19	0.218	0.203
3/32	0.78	0.328	0.328
1/8	0.70	0.328	0.328
5/32	1.18	0.328	0.422
3/16	1.06	0.328	0.422
1/4	6.10	0.703	0.650
5/16	5.25	0.703	0.650

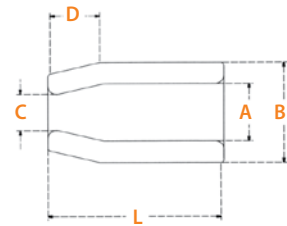
## Aluminum Stop Sleeves



For Cable Diameter	Weight per 100pcs (Lbs)	Dimensions (Inch)	
		A	B
1/16	0.060	0.156	0.250
3/32	0.250	0.313	0.344
1/8	0.210	0.313	0.344
5/32	0.420	0.344	0.438
3/16	0.390	0.344	0.438
1/4	0.204	0.688	0.688

**Stainless Steel Sleeve  
Type 316 Formed**


A	B	C	L	After Swage
1/32"	0.09"	0.13"	1/4"	0.097"
3/64"	0.13"	0.19"	3/8"	0.149"
1/16"	0.13"	0.20"	3/8"	0.149"
3/32"	0.16"	0.27"	3/8"	0.190"
1/8"	0.25"	0.36"	3/8"	0.265"
5/32"	0.30"	0.49"	23/32"	0.353"
3/16"	0.34"	0.55"	1"	0.390"
7/32"	0.42"	0.66"	1-1/8"	0.480"
1/4"	0.43"	0.70"	1-3/8"	0.510"
5/16"	0.56"	0.88"	1-3/8"	0.625"
3/8"	0.75"	1.13"	1-3/4"	0.75"
1/2"	0.92"	1.43"	1-3/8"	1"
5/8"	1.25"	1.85"	2-5/8"	1-1/8"
3/4"	1.50"	2.15"	3"	1-1/2"

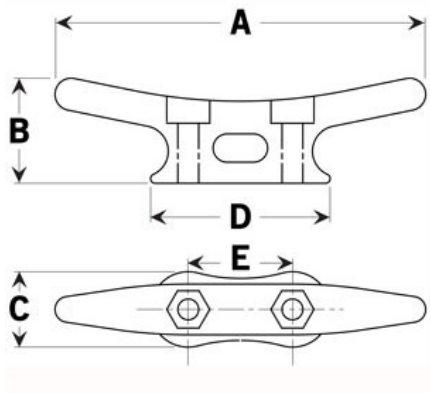
**Stainless Steel Flemish Sleeve  
Type 316 Machined**


Rope Size (Inch)	A	B	C	D	L	After Swage	WT/100 (lbs)
1/4	0.47"	0.66"	0.31"	0.28"	1"	0.57"	5
5/16	0.62"	0.91"	0.38"	0.44"	1-1/2"	0.75"	14
3/8	0.66"	0.91"	0.47"	0.39"	1-1/2"	0.75"	15
1/2	0.91"	1.22"	0.63"	0.56"	2"	1.01"	29
5/8	1.09"	1.47"	0.75"	0.63"	2-3/4"	1.24"	56





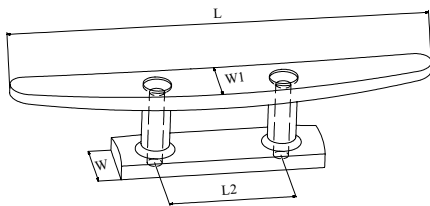
## DOCK CLEATS



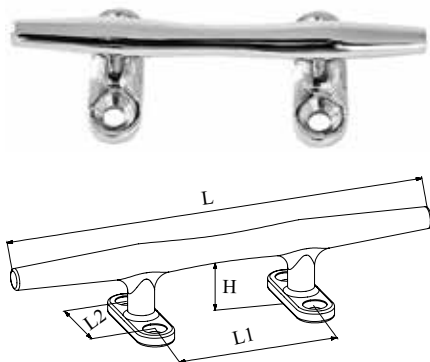
### Galvanized Dock Cleats

Nominal Size	Dimensions (mm)				
	A	B	C	D	E
4"	104	28.5	22	47	23
6"	146	34	22	55	31.7
8"	201	51	35	81	41.4
10"	263	59	38	103.5	60.5
12"	306	74	48	141	85.8

### Stainless Steel Low Flat Dock Cleats

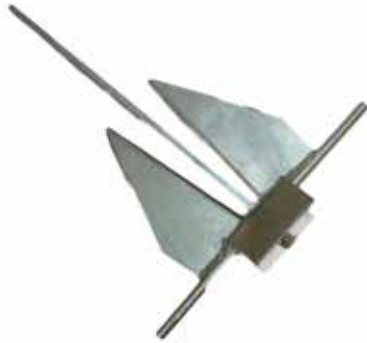


L mm	L2 mm	W mm	W1 mm	Screw
100	30	15	14	M4
125	40	17	16	M4
150	45	19	18	M5
200	55	23	22	M6
250	70	27	26	M8



### Stainless Steel Herreshoff Dock Cleats

L mm	L2 mm	L2 mm	H mm	Screw
100	48	24	17	M5
125	54	26	19	M5
150	57	28	21	M6
200	76	34	25,5	M6
250	95	44	30	M8
300	100	50	34	M8



### Hot Dipped Galvanized Danforth Anchor

Item Code	Weight (lbs)
961004	4
961006	6
961008	8
961014	14
961018	18
961022	22
961025	25
961033	33
961040	40
961070	70





