

**CLEVELAND  
CITY FORGE**

FORGED STEEL STRUCTURAL HARDWARE  
SINCE 1864



Cleveland City Forge was established in 1864 to primarily manufacture parts for the marine industry. By the late 1920's, the product line was expanded to include clevises and turnbuckles for the growing construction market.

Since its beginning, Cleveland City Forge has made a commitment to quality. Recognizing this, ASTM in search of industry standards, developed specifications in the early 1950's for clevis and turnbuckle forgings. These standards are still in use today.

Cleveland City Forge has grown to be a major supplier in the industrial fastener industry. The ability to offer a full range of custom and standard sizes and combine them to create complete assemblies, has enabled them to supply a wide variety of applications and markets.

Projects range from new construction to renovations. Some of the most recent domestic projects include the Boston Tunnel (Boston, MA), Jacob's Field (Cleveland, OH), and the airport expansions in New York, Cleveland and Detroit. Internationally, components have been supplied for nuclear power plants in China and Japan, the Toronto Convention Center, Vancouver Airport and applications in Europe, the Middle East, Korea and the Pacific Rim.

## CONTENTS

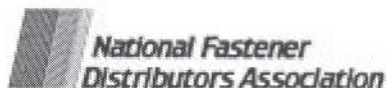
Applications .....	2, 3
Clevises .....	4
<b>Clevis Pins</b>	
<b>Headed</b> .....	5
<b>Straight</b> .....	5
<b>Eyebolts</b>	
<b>Plain</b> .....	11
<b>Shoulder</b> .....	11
<b>Eye Nuts</b> .....	13
<b>Nuts</b>	
<b>Long Coupling</b> .....	15
<b>Standard Coupling</b> .....	15
<b>Hex Jam</b> .....	15
<b>Heavy Hex</b> .....	16
<b>Pad Eyes</b> .....	14
<b>Recessed Nuts &amp; Pins</b> .....	14
<b>Rod Ends</b> .....	6
<b>Rods</b>	
<b>Threaded</b> .....	6
<b>Upset</b> .....	6
<b>Turnbuckles</b> .....	7
<b>Turnbuckle Assemblies</b>	
<b>Jaw &amp; Jaw</b> .....	8
<b>Jaw &amp; Eye</b> .....	8
<b>Hook &amp; Hook</b> .....	9
<b>Hook &amp; Eye</b> .....	9
<b>Eye &amp; Eye</b> .....	10
<b>Stub Ends</b> .....	10
<b>Washers: Plate</b> .....	16
<b>Yoke Ends</b>	
<b>Plain</b> .....	12
<b>Adjustable</b> .....	12
<b>Yoke Pins</b> .....	12



ASSOCIATE



ASSOCIATE



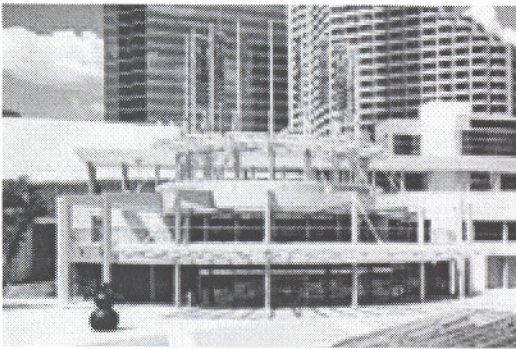
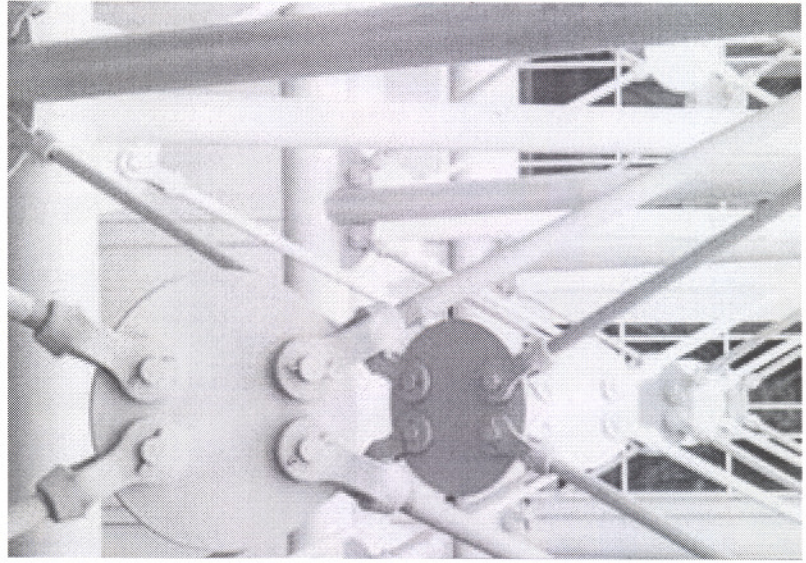
Product Classification  
5 - Metals - 05100  
Structural Metal Framing

## APPLICATIONS



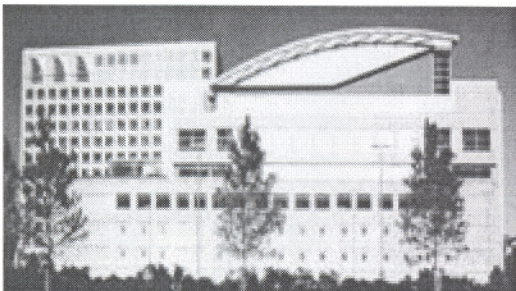
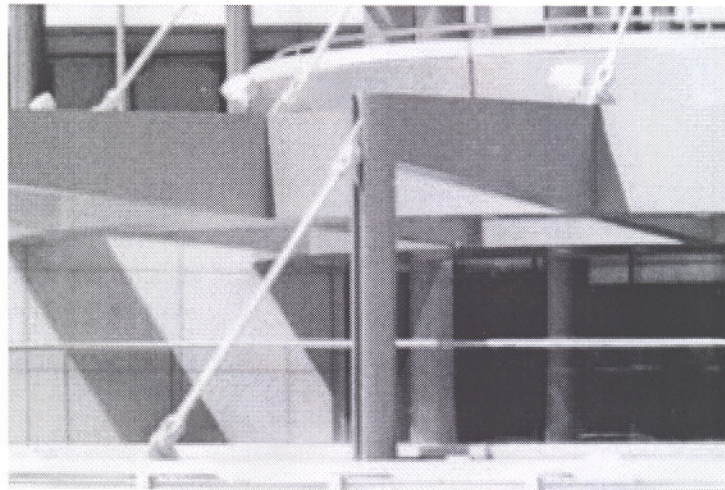
### Jacob's Field - Home of The Cleveland Indians Cleveland, Ohio

The main support columns of the Cleveland Indians Baseball Stadium are reinforced with a cross-bracing system that include #8 clevises and threaded rods.



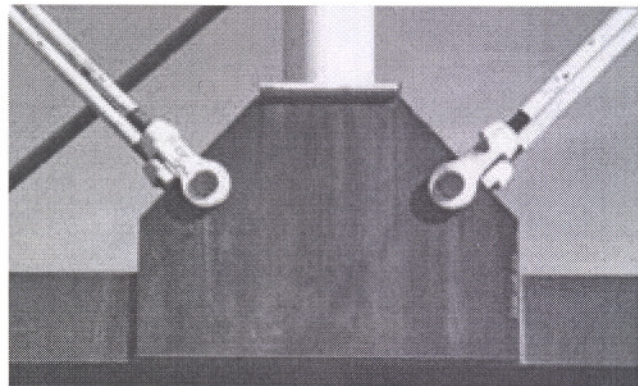
### Metro Toronto Convention Centre Toronto, Ontario Canada

The glass awning structure at the South Entrance of the Metro Toronto Convention Centre are supported with #7 and #8 clevises along with threaded rods.



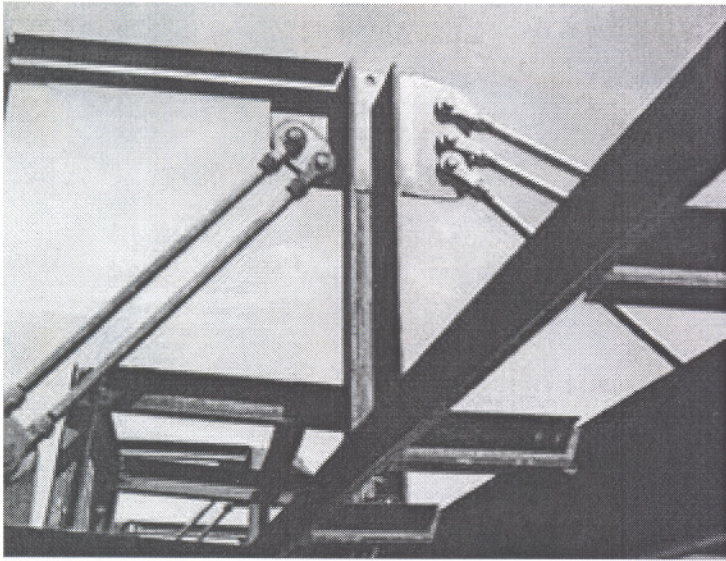
### Swiss Bank Corporate Headquarters Stamford, Connecticut

The dome effect on the Swiss Bank in Connecticut was achieved with the use of an arched beam attached to metal plate with clevises and pins.

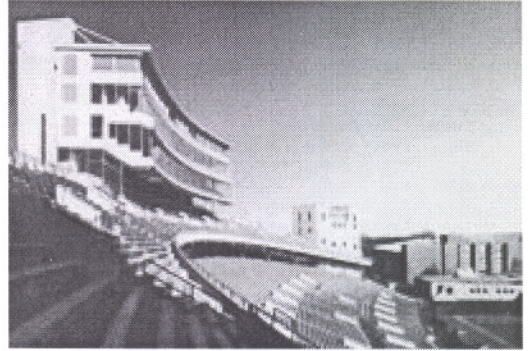


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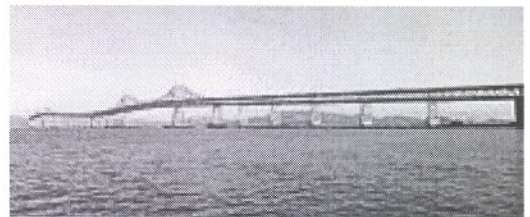
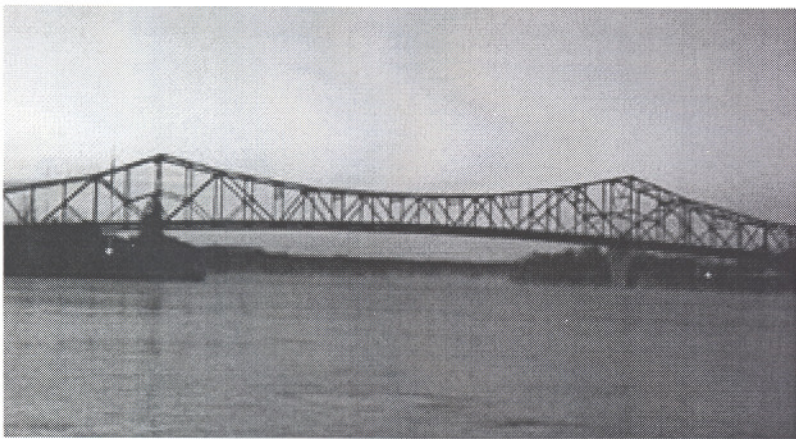


## APPLICATIONS



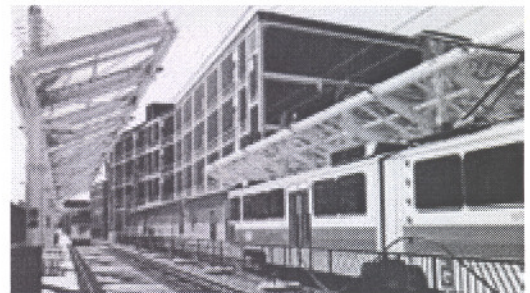
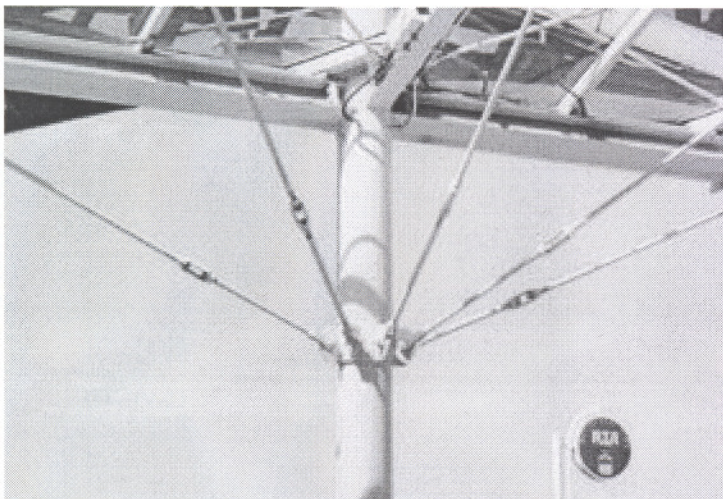
### **Northwestern State University Natchitoches, Louisiana**

A Press Box addition was recently constructed at NSU Demon Football Stadium. Structural framing was supported with clevises and threaded rods.



### **The Richmond - San Rafael Bridge California**

Cleveland City Forge is proud to be providing #8 and #5 clevises along with and 3-1/2 x 6 Turnbuckles to complete a seismic retrofit to strengthen the bridge.



### **RTA Station - Lakefront Line Cleveland, Ohio**

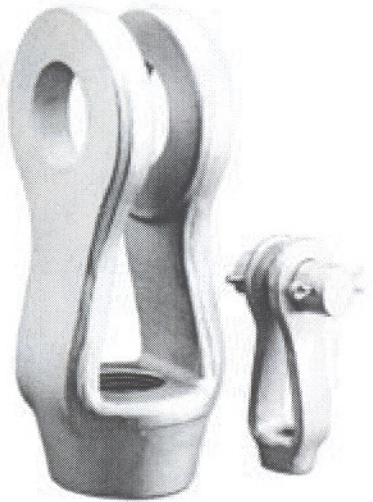
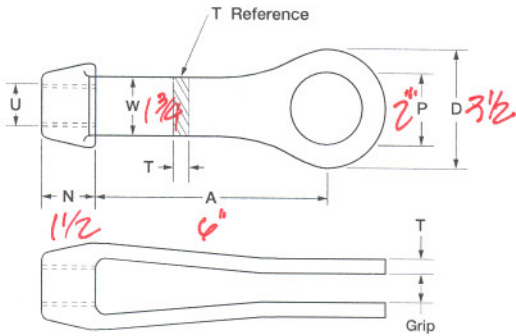
Two new large glass awnings were constructed to protect riders from the constantly changing Cleveland weather. The combination of clevises, turnbuckles and rods were used to support these heavy structures.

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## CLEVISES

- Material:** C-1035, SA-182-F-11, Stainless Steel  
**Threads:** U.N.C./U.N.F. Class 2 B, Right or Left Hand, Metric  
**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished  
**Options:** Other Alloys, Heat Treating, Special Threading  
**Note:** Pins Sold Separately - Straight or Headed



**Table I: Standard Clevis Dimensions (Inches)**

Part No.	Clevis No.	D	N	Thd. Max. U	W	T	A	Pin Max. P	Rated Capacity (Lbs.)	Unit Wt. (Lbs.)
CL20	2	1 7/16	5/8	5/8	1 1/16	5/16 + 1/32-0	3 9/16	3/4	3500	1
CL25	2 1/2	2 1/2	1	7/8	1 1/4	5/16 + 1/32-0	4	1 1/2	7500	2 1/2
CL30	3	3	1 1/4	1 3/8	1 1/2	1/2 + 1/16-1/32	5 1/16	1 3/4	15000	4
CL35	3 1/2	3 1/2	1 1/2	1 1/2	1 3/4	1/2 + 1/16-1/16	6	2	18000	6
CL40	4	4	1 3/4	1 3/4	2	1/2 + 1/16-1/16	5 15/16	2 1/4	21000	9
CL50	5	5	2 1/4	2 1/8	2 1/2	5/8 + 3/32-0	7	2 1/2	37500	16
CL60	6	6	2 3/4	2 1/2	3	3/4 + 3/32-0	8	3	54000	26
CL70	7	7	3	3	3 1/2	7/8 + 1/8-1/16	9	3 3/4	68500	36
CL80	8	8	4	4	4	1 1/2 + 1/8-1/16	10 1/8	4 1/4	135000	90

Maximum working loads have been established with a design factor of 5:1 using the maximum pin diameter, the resulting net area of the eye at the pin hole, and the expected ultimate tensile strength of C-1035 steel.

The maximum tap size (U dimension) shown in Table I, is for reference purposes only. It should be used only to determine the largest tap diameter the clevis may accommodate without considering the pin diameter. Use Table II to select the proper combination of tap size and pin diameter for any given size of clevis.

Clevis sizes in Table II for any given tap size and pin diameter combination are based upon the net area of the eye at the pin hole, being equal to or greater than 125% of the net area at the minor diameter of a round rod without upset ends, threaded Unified National Coarse Series.

For any combination of tap size and pin diameter shown, the pin in double shear will develop the strength

of the rod if both the rod and pin are made from steel having the same physical properties. The pin must be investigated for bending. If inadequate, a larger diameter pin must be selected.

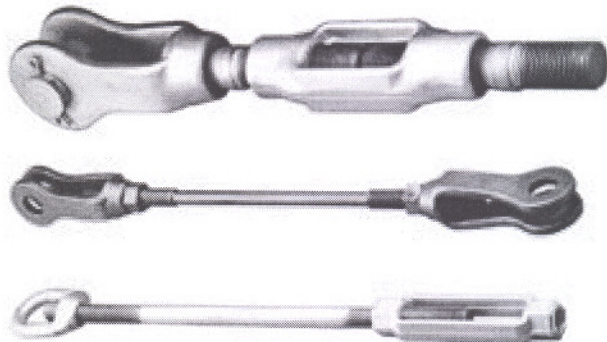
If the pin is made from steel with physical properties lower in value than the steel used for the rod, the pin may not develop the strength of the rod and either shear or bend. A larger pin diameter would then be required.

Some combinations of tap size and pin diameter shown will not develop the maximum working load of the clevis shown in Table I.

Selection of the rod and pin, and the material specifications including the clevis size are the responsibility of the purchaser or user. Load required should not exceed the maximum working load values shown in Table I.

## ASSEMBLIES

- Material:** C-1035, A-36, SA-182-F-11, Stainless Steel  
**Threads:** U.N.C./U.N.F. Class 2A/2B, Right or Left Hand, Metric  
**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished



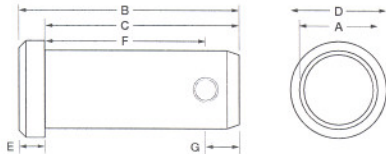
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**Table II: Diameter of Pin (Inches)**

	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4
Diameter of Tap	3/8	2	2	2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	1/2	2	2	2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	5/8	2	2	2	2 1/2	2 1/2	2 1/2	2 1/2	•	•	•	•	•	•	•	•	•	•
	3/4	•	•	2 1/2	2 1/2	2 1/2	2 1/2	•	•	•	•	•	•	•	•	•	•	•
	7/8	•	•	•	2 1/2	2 1/2	2 1/2	3	•	•	•	•	•	•	•	•	•	•
	1	•	•	•	•	3	3	3	•	•	•	•	•	•	•	•	•	•
	1 1/8	•	•	•	•	3	3	3	3 1/2	•	•	•	•	•	•	•	•	•
	1 1/4	•	•	•	•	3	3	3	3 1/2	•	•	•	•	•	•	•	•	•
	1 3/8	•	•	•	•	•	3	3	3 1/2	3 1/2	4	•	•	•	•	•	•	•
	1 1/2	•	•	•	•	•	3 1/2	3 1/2	4	4	5	•	•	•	•	•	•	•
	1 5/8	•	•	•	•	•	4	4	4	5	5	5	•	•	•	•	•	•
	1 3/4	•	•	•	•	•	•	4	5	5	5	5	•	•	•	•	•	•
	1 7/8	•	•	•	•	•	•	•	5	5	5	5	•	•	•	•	•	•
	2	•	•	•	•	•	•	•	5	5	5	5	6	6	•	•	•	•
	2 1/8	•	•	•	•	•	•	•	•	5	5	6	6	6	•	•	•	•
	2 1/4	•	•	•	•	•	•	•	•	6	6	6	6	6	7	7	•	•
	2 3/8	•	•	•	•	•	•	•	•	6	6	6	6	7	7	7	7	•
	2 1/2	•	•	•	•	•	•	•	•	6	6	6	7	7	7	7	7	•
	2 5/8	•	•	•	•	•	•	•	•	•	7	7	7	7	7	7	8	•
	2 3/4	•	•	•	•	•	•	•	•	•	7	7	7	7	7	8	8	•
2 7/8	•	•	•	•	•	•	•	•	•	7	8	8	8	8	8	8	8	
3	•	•	•	•	•	•	•	•	•	7	8	8	8	8	8	8	8	
3 1/8	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	8	
3 1/4	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	8	
3 3/8	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	8	
3 1/2	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	8	
3 5/8	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	•	
3 3/4	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	•	
3 7/8	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	•	
4	•	•	•	•	•	•	•	•	•	•	8	8	8	8	8	8	•	

Part No.	Pin Dia. A	LENGTHS		HEAD		HOLE			Unit Weight (Lbs.)
		Overall Length B	Under Head C	O.D. D	Thickness E	I.D.	Center Under Head F	G	
PH008	1/2	2 5/32	1 15/16	13/16	7/32	1/8	1 13/16	1/8	.13
PH010	5/8	2 17/32	2 5/16	1 1/32	7/32	5/32	2 5/32	5/32	.24
PH012	3/4	3	2 3/4	1 3/16	1/4	3/16	2 9/16	3/16	.40
PH014	7/8	3 1/2	3 1/4	1 1/4	1/4	13/64	3	1/4	.62
PH100	1	4 5/32	3 25/32	1 7/16	3/8	13/64	3 17/32	1/4	.96
PH102	1 1/8	4 5/8	4 1/4	1 5/8	3/8	13/64	3 15/16	5/16	1.34



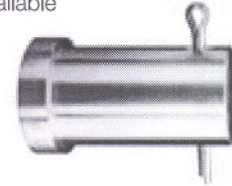
**CLEVIS PIN: HEADED**

**Material:** C1018, C1035, C1045, 304SS, and 316SS

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

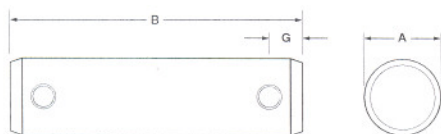
**Options:** Other Carbon or Alloys, Heat Treating

**Note:** Includes Cotter Pins, Other Sizes Available



The pin diameters and lengths represent the standard in-stock items. Since pin diameters and lengths may vary due to the size and grip of the clevis, please provide specific pin dimensions

Part No.	Diameter A	Overall Length B	G	I.D. Cotter Hole	Unit Weight (Lbs.)
PC0083	1/2	2 1/2	3/8	9/64	0.14
PC0103	5/8	2 1/2	3/8	9/64	0.22
PC0123	3/4	3	3/8	9/64	0.38
PC0143	7/8	4	5/8	1 1/4	0.68
PC1003	1	4	5/8	1 1/4	0.89
PC1023	1 1/8	4 1/2	5/8	1 1/4	1.27
PC1043	1 1/4	4	5/8	1 1/4	1.39
PC1063	1 3/8	4 1/2	5/8	1 1/4	1.89
PC1083	1 1/2	4 1/2	5/8	1 1/4	2.25
PC1103	1 5/8	5	5/8	1 1/4	2.94
PC1123	1 3/4	5	5/8	1 1/4	3.41
PC2003	2	5	5/8	3/8	4.45



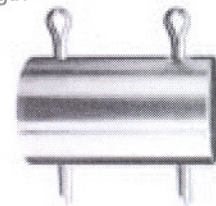
**CLEVIS PIN: STRAIGHT**

**Material:** C-1035, SA-182-F-11, Stainless Steel

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

**Options:** Other Carbon or Alloys, Heat Treating

**Note:** Includes Cotter Pins, Pin Diameter Greater Than 2" Up To 4 1/4", Specify Length



## ROD ENDS

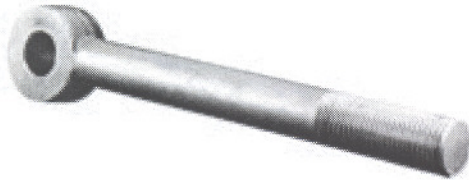
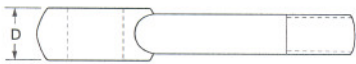
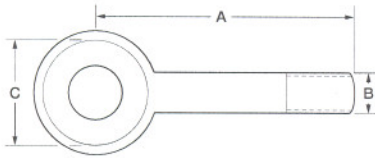
**Material:** C-1030/1035, C-4140, Stainless Steel

**Threads:** U.N.C. Class 2A, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated

**Options:** Other Carbon or Alloys, Heat Treating, Special Threading

**Note:** Stocked items available forged, machined, or to custom specifications



### Forged Dimensions

Part No.	A	B	C	D	Unit Weight (Lbs.)
REB005300K-0001	5/16	1 1/2	19/32	11/32	0.05
REB006300K-0001	3/8	3 1/2	3/4	7/16	0.25
REB006300K-0002	3/8	6	3/4	7/16	0.25
REB007300K-0001	7/16	6	7/8	1/2	0.33
REB007300K-0002	7/16	12	7/8	1/2	0.59
REB008300K-0001	1/2	3 1/2	31/32	9/16	0.33
REB008300K-0002	1/2	3 1/2	1 1/8	1/2	0.33
REB008300K-0003	1/2	6	31/32	9/16	0.50
REB008300K-0004	1/2	6	1 1/8	1/2	0.50
REB008300K-0005	1/2	12	31/32	9/16	0.86
REB008300K-0006	1/2	12	1 1/8	1/2	0.86
REB010300K-0001	5/8	3 1/2	1 1/4	11/16	0.55
REB010300K-0002	5/8	6	1 1/4	11/16	0.75
REB010300K-0003	5/8	12	1 1/4	11/16	1.25
REB012300K-0001	3/4	3 1/2	1 1/2	13/16	0.75
REB012300K-0002	3/4	6	1 1/2	13/16	1.25
REB012300K-0003	3/4	12	1 1/2	13/16	1.85
REB014300K-0001	7/8	6	1 13/16	15/16	1.50
REB014300K-0002	7/8	12	1 13/16	15/16	2.60
REB100300K-0001	1	6	2 1/32	1 1/16	2.25
REB100300K-0002	1	12	2 1/32	1 1/16	3.47
REB104300K-0001	1 1/4	12	2 5/8	1 5/16	4.90
REB109300K-0001	1 1/2	12	3	1 1/2	8.75

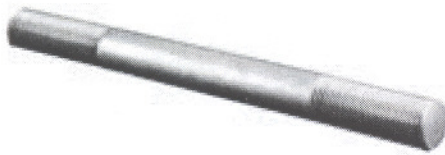
## THREADED RODS

**Material:** C-1035, A-36, Stainless Steel

**Threads:** U.N.C./U.N.F. Class 2A, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated

**Options:** Other Carbon or Alloys, Heat Treating, Special Threading



Specify Overall Length Up To 40' Maximum

Part No.	Size	Weight Per Ft.
RTF006	3/8	0.376
RTF008	1/2	0.668
RTF010	5/8	1.044
RTF012	3/4	1.504
RTF014	7/8	2.046
RTF100	1	2.673
RTF102	1 1/8	3.383
RTF104	1 1/4	4.176
RTF106	1 3/8	5.053
RTF108	1 1/2	6.014
RTF110	1 5/8	7.058
RTF112	1 3/4	8.186
RTF114	1 7/8	9.397
RTF200	2	10.669
RTF204	2 1/4	13.53
RTF206	2 3/8	15.08
RTF208	2 1/2	16.71
RTF212	2 3/4	20.21
RTF214	2 7/8	22.09
RTF300	3	24.06
RTF304	3 1/4	28.23
RTF308	3 1/2	32.74
RTF312	3 3/4	37.59
RTF400	4	42.77

Upset Diameters From 1 3/8" to 5 1/4"

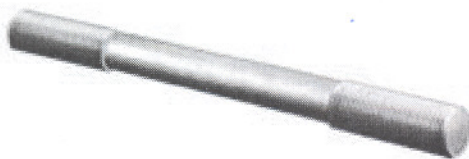
## UPSET RODS

**Material:** C-1035, A-36, Stainless Steel

**Threads:** U.N.C./U.N.F. Class 2A, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated

**Options:** Other Carbon or Alloys, Heat Treating, Special Threading



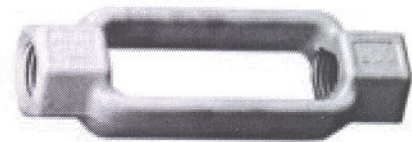
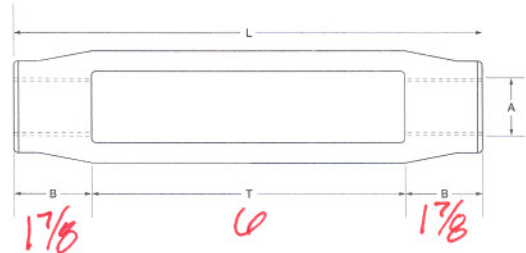
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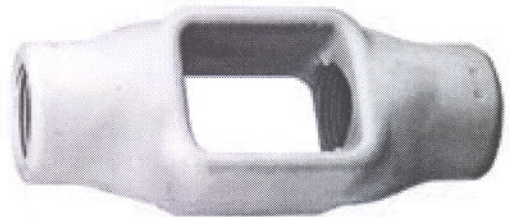
# TURNBUCKLES

Part No.	Thread Diameter (Inches) A		Take Up T	Body Length (Inches) L	Nut End B	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
TB01	3/8	x	6	7 1/8	9/16	1200	0.42
TB03	1/2	x	3	4 7/8	15/16	2200	0.56
TB04	1/2	x	4	5 9/16	25/32	2200	0.85
TB05	1/2	x	6	7 9/16	25/32	2200	0.65
TB06	1/2	x	9	10 9/16	25/32	2200	0.90
TB07	1/2	x	12	13 9/16	25/32	2200	1.20
TBX8	5/8	x	3	4 7/8	15/16	3500	0.56
TB08	5/8	x	4	5 7/8	15/16	3500	0.82
TB09	5/8	x	6	7 7/8	15/16	3500	0.98
TB10	5/8	x	9	10 7/8	15/16	3500	1.84
TB11	5/8	x	12	13 7/8	15/16	3500	2.35
TB13	3/4	x	6	8 1/8	1 1/16	5200	1.45
TB14	3/4	x	9	11 1/8	1 1/16	5200	1.84
TB15	3/4	x	12	14 1/8	1 1/16	5200	2.35
TB18	7/8	x	6	8 5/8	1 5/16	7200	1.85
TB19	7/8	x	12	14 7/8	1 7/16	7200	4.00
TB21	1	x	6	8 7/8	1 7/16	9300	2.60
TB22	1	x	12	14 7/8	1 7/16	9300	4.02
TB26	1 1/8	x	6	9 1/8	1 9/16	11600	4.06
TB27	1 1/8	x	12	15 1/8	1 9/16	15200	9.74
TB29	1 1/4	x	6	9 1/8	1 9/16	15200	4.00
TB30	1 1/4	x	12	15 1/8	1 9/16	15200	9.74
TB33	1 3/8	x	6	9 5/8	1 13/16	17400	6.15
TB34	1 3/8	x	12	15 3/4	1 7/8	17400	9.70
TB35	1 1/2	x	6	9 3/4	1 7/8	21000	6.15
TB36	1 1/2	x	12	15 3/4	1 7/8	21000	9.74
TB39	1 5/8	x	6	11	2 1/2	24500	9.80
TB40	1 5/8	x	12	17 1/2	2 3/4	26000	15.25
TB41	1 3/4	x	6	11	2 1/2	28000	9.80
TB42	1 3/4	x	12	17	2 1/2	28000	15.25
TB45	1 7/8	x	6	11 5/8	2 13/16	37000	14.00
TB46	1 7/8	x	12	17 1/2	2 3/4	37000	15.25
TB49	2	x	6	11 5/8	2 13/16	37000	14.00
TB50	2	x	12	17 1/2	2 3/4	37000	15.25
TB53	2 1/4	x	6	12 5/8	3 5/16	48000	19.60
TB54	2 1/4	x	12	19 5/8	3 13/16	48000	30.92
TB57	2 3/8	x	6	13 1/2	3 3/4	52500	23.25
TB58	2 1/2	x	6	13 1/2	3 3/4	60000	23.25
TB59	2 1/2	x	12	19 1/2	3 3/4	60000	30.92
TB63	2 3/4	x	6	14 3/8	4 3/16	75000	31.50
TB65	2 3/4	x	12	22 1/2	5 1/4	79000	60.50
TB67	2 7/8	x	6	14 3/4	4 3/8	79400	39.50
TB68	3	x	6	14 5/8	4 5/16	96700	39.50
TB70	3	x	12	22 1/2	5 1/4	100000	60.50
TB80	3 1/4	x	6	16 7/8	5 7/16	104000	60.50
TB82	3 1/4	x	12	22 1/2	5 1/4	104000	60.50
TB85	3 1/2	x	6	16 7/8	5 7/16	122200	60.50
TB87	3 1/2	x	12	22 1/2	5 1/4	122200	60.50
TB88	3 3/4	x	6	18	6	167800	95.00
TB93	4	x	6	18	6	167800	95.00
TB98	4 1/2	x	9	22 1/2	6 3/4	233800	152.00

**Material:** C-1035, SA-182-F-11, Stainless Steel  
**Threads:** U.N.C./U.N.F. Class 2B, Right or Left Hand, Metric  
**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished  
**Options:** Other Alloys; Heat Treating, Special Threading  
**Specifications:** ASTM F1145-92



Sizes 3/8" to 1 3/4"



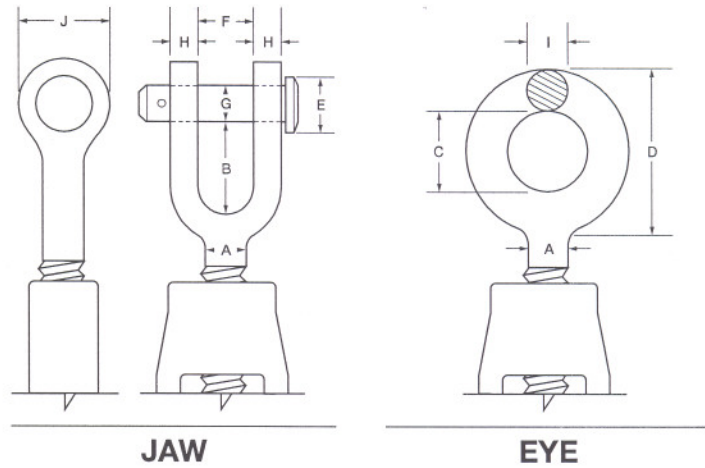
Sizes 1 7/8" to 4 1/2"

## TURNBUCKLE ASSEMBLIES

**Material:** C-1030

**Threads:** U.N.C. Class 2A, Right or Left Hand

**Finish:** Galvanized

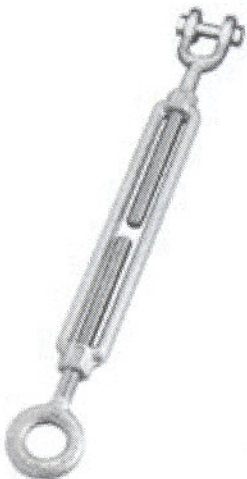


### ASSEMBLY: JAW & JAW



Part No.	Turnbuckle		Jaw					Overall Closed Length	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thd. Dia. A	Take Up T	F	B	G	H	J			
TBJJ004	1/4	X 4	7/16	5/8	1/4	7/32	5/8	8	500	0.28
TBJJ005	5/16	X 4 1/2	1/2	3/4	1/4	1/4	11/16	9	800	0.49
TBJJ006	3/8	X 6	9/16	13/16	5/16	5/16	13/16	12	1200	0.85
TBJJ008	1/2	X 6	5/8	1	7/16	3/8	1	13	2100	1.64
TBJJ008-2	1/2	X 9	5/8	1	7/16	3/8	1	16	2100	1.95
TBJJ008-3	1/2	X 12	5/8	1	7/16	3/8	1	19	2100	2.40
TBJJ010	5/8	X 6	3/4	1 5/16	1/2	7/16	1 5/16	16	3200	2.75
TBJJ010-2	5/8	X 9	3/4	1 5/16	1/2	7/16	1 5/16	19	3200	3.25
TBJJ010-3	5/8	X 12	3/4	1 5/16	1/2	7/16	1 5/16	22	3200	4.00
TBJJ012	3/4	X 6	15/16	1 1/2	5/8	7/16	1 5/8	17	5000	4.50
TBJJ012-2	3/4	X 9	15/16	1 1/2	5/8	7/16	1 5/8	20	5000	4.98
TBJJ012-3	3/4	X 12	15/16	1 1/2	5/8	7/16	1 5/8	23	5000	5.78
TBJJ014	7/8	X 12	1 1/16	1 3/4	3/4	1/2	1 3/4	25	7000	8.75
TBJJ100	1	X 6	1 3/16	2	1	5/8	2 1/8	18	10000	9.20
TBJJ100-2	1	X 12	1 3/16	2	1	5/8	2 1/8	24	10000	12.10

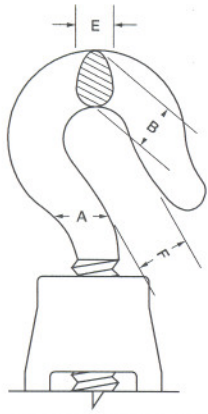
### ASSEMBLY: JAW & EYE



Part No.	Turnbuckle		Eye				Jaw					Overall Closed Length	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thread Dia. A	Take Up T	C	D	I	F	B	G	H	J				
TBEJ004	1/4	x 4	1/2	1	1/4	7/16	5/8	1/4	7/32	5/8	8	500	0.26	
TBEJ005	5/16	x 4 1/2	5/8	1 1/4	5/16	1/2	3/4	1/4	1/4	11/16	9	800	0.45	
TBEJ006	3/8	x 6	3/4	1 1/2	3/8	9/16	13/16	5/16	5/16	13/16	12	1200	0.78	
TBEJ008	1/2	x 6	1	1 15/16	7/16	5/8	1	7/16	3/8	1	13	2100	1.51	
TBEJ008-2	1/2	x 9	1	1 15/16	7/16	5/8	1	7/16	3/8	1	16	2100	1.79	
TBEJ008-3	1/2	x 12	1	1 15/16	7/16	5/8	1	7/16	3/8	1	19	2100	2.20	
TBEJ010	5/8	x 6	1 3/8	2 1/2	9/16	3/4	1 15/16	1/2	7/16	1 5/16	16	3200	2.53	
TBEJ010-2	5/8	x 9	1 3/8	2 1/2	9/16	3/4	1 15/16	1/2	7/16	1 5/16	19	3200	2.99	
TBEJ010-3	5/8	x 12	1 3/8	2 1/2	9/16	3/4	1 15/16	1/2	7/16	1 5/16	22	3200	3.68	
TBEJ012	3/4	x 6	1 1/2	2 13/16	21/32	15/16	1 1/2	5/8	7/16	1 5/8	17	5000	4.14	
TBEJ012-2	3/4	x 9	1 1/2	2 13/16	21/32	15/16	1 1/2	5/8	7/16	1 5/8	20	5000	4.58	
TBEJ012-3	3/4	x 12	1 1/2	2 13/16	21/32	15/16	1 1/2	5/8	7/16	1 5/8	23	5000	5.32	
TBEJ014	7/8	x 12	1 11/16	3 1/4	3/4	1 1/16	1 3/4	3/4	1/2	1 3/4	25	7000	8.05	
TBEJ100	1	x 6	1 13/16	3 9/16	7/8	1 3/16	2	1	5/8	2 1/8	18	10000	8.05	
TBEJ100-2	1	x 12	1 13/16	3 9/16	7/8	1 3/16	2	1	5/8	2 1/8	24	10000	11.13	

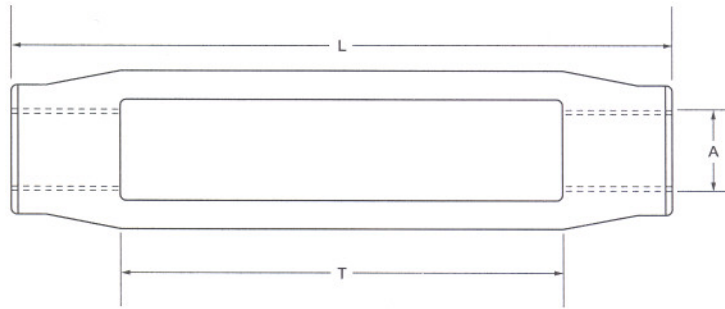
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**HOOK**

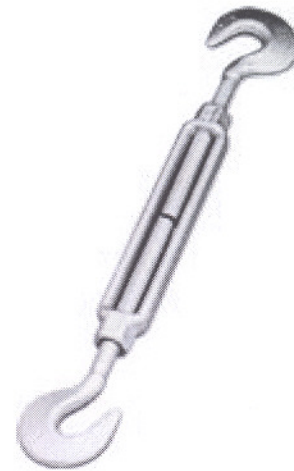
**TURNBUCKLE ASSEMBLIES**



**TURNBUCKLE**

Part No.	Turnbuckle			Hook			Overall Closed Length	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thread Dia. A	Take Up T	B	E	F				
TBHH004	1/4	x 4	3/8	1/4	9/32	8 1/4	300	0.25	
TBHH005	5/16	x 4 1/2	1/2	5/16	13/32	9 9/16	500	0.44	
TBHH006	3/8	x 6	19/32	3/8	17/32	11 7/8	700	0.79	
TBHH008	1/2	x 6	13/16	1/2	21/32	13	1040	1.51	
TBHH008-2	1/2	x 9	13/16	1/2	21/32	17 1/2	1040	1.81	
TBHH008-3	1/2	x 12	13/16	1/2	21/32	20 1/2	1040	2.20	
TBHH010	5/8	x 6	7/8	5/8	15/16	16	1600	2.50	
TBHH010-2	5/8	x 9	7/8	5/8	15/16	19 1/4	1600	3.00	
TBHH010-3	5/8	x 12	7/8	5/8	15/16	21 3/4	1600	3.60	
TBHH012	3/4	x 6	1	3/4	31/32	17 3/4	2000	3.90	
TBHH012-2	3/4	x 9	1	3/4	31/32	20 3/4	2000	4.60	
TBHH012-3	3/4	x 12	1	3/4	31/32	23 3/4	2000	5.30	
TBHH014	7/8	x 12	1 1/8	7/8	1 1/4	27 1/4	2400	7.60	
TBHH100	1	x 6	1 5/16	1	1 1/4	21 1/4	2900	7.50	
TBHH100-2	1	x 12	1 5/16	1	1 1/4	26 5/8	2900	10.00	

**ASSEMBLY: HOOK & HOOK**



Part No.	Turnbuckle			Eye			Hook			Overall Closed Length	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thread Dia. A	Take Up T	C	D	I	E	F	B				
TBEH004	1/4	x 4	1/2	1	1/4	1/4	9/32	3/8	8 1/4	300	0.25	
TBEH005	5/16	x 4 1/2	5/8	1 1/4	5/16	5/16	13/32	1/2	9 9/16	500	0.44	
TBEH006	3/8	x 6	3/4	1 1/2	3/8	3/8	17/32	19/32	11 7/8	700	0.79	
TBEH008	1/2	x 6	1	1 15/16	7/16	1/2	21/32	13/16	13	1040	1.51	
TBEH008-2	1/2	x 9	1	1 15/16	7/16	1/2	21/32	13/16	17 1/2	1040	1.81	
TBEH008-3	1/2	x 12	1	1 15/16	7/16	1/2	21/32	13/16	20 1/2	1040	2.20	
TBEH010	5/8	x 6	1 3/8	2 1/2	9/16	5/8	15/16	7/8	16	1600	2.50	
TBEH010-2	5/8	x 9	1 3/8	2 1/2	9/16	5/8	15/16	7/8	19 1/4	1600	3.00	
TBEH010-3	5/8	x 12	1 3/8	2 1/2	9/16	5/8	15/16	7/8	21 3/4	1600	3.60	
TBEH012	3/4	x 6	1 1/2	2 13/16	21/32	3/4	31/32	1	17 3/4	2000	3.90	
TBEH012-2	3/4	x 9	1 1/2	2 13/16	21/32	3/4	31/32	1	20 3/4	2000	4.60	
TBEH012-3	3/4	x 12	1 1/2	2 13/16	21/32	3/4	31/32	1	23 3/4	2000	5.30	
TBEH014	7/8	x 12	1 11/16	3 1/4	3/4	7/8	1 1/4	1 1/8	27 1/4	2400	7.60	
TBEH100	1	x 6	1 13/16	3 9/16	7/8	1	1 1/4	1 5/16	21 1/4	2900	7.50	
TBEH100-2	1	x 12	1 13/16	3 9/16	7/8	1	1 1/4	1 5/16	26 5/8	2900	10.00	

**ASSEMBLY: HOOK & EYE**

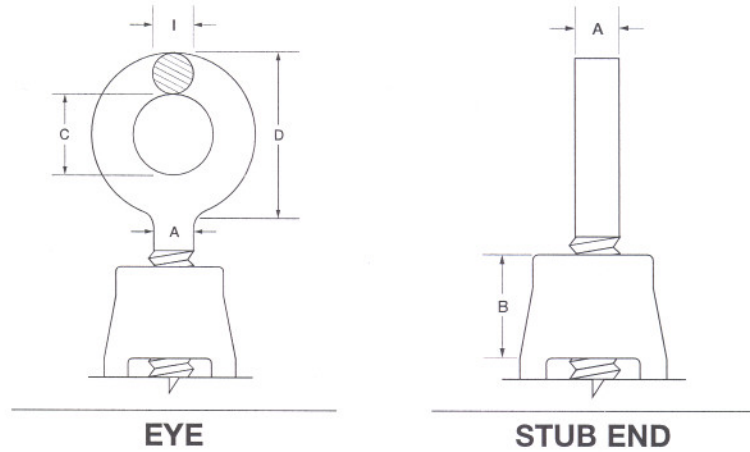


## TURNBUCKLE ASSEMBLIES

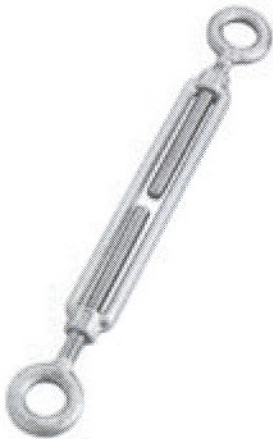
**Material:** C-1030

**Threads:** U.N.C. Class 2A, Right or Left Hand

**Finish:** Galvanized

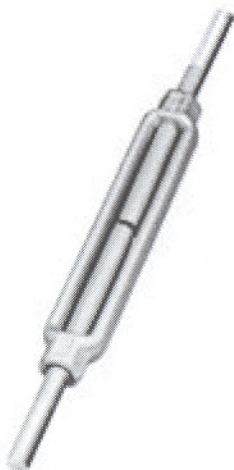


## ASSEMBLY: EYE & EYE



Part No.	Turnbuckle		Eye			Overall Closed Length	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thread Dia. A	Take Up T	C	D	I			
TBEE004	1/4	x 4	1/2	1	1/4	8 1/4	500	0.25
TBEE005	5/16	x 4 1/2	5/8	1 1/4	5/16	9 9/16	800	0.44
TBEE006	3/8	x 6	3/4	1 1/2	3/8	11 7/8	1200	0.79
TBEE008	1/2	x 6	1	1 15/16	7/16	13	2100	1.51
TBEE008-2	1/2	x 9	1	1 15/16	7/16	17 1/2	2100	1.81
TBEE008-3	1/2	x 12	1	1 15/16	7/16	20 1/2	2100	2.20
TBEE010	5/8	x 6	1 3/8	2 1/2	9/16	16	3200	2.50
TBEE010-2	5/8	x 9	1 3/8	2 1/2	9/16	19 1/4	3200	3.00
TBEE010-3	5/8	x 12	1 3/8	2 1/2	9/16	21 3/4	3200	3.60
TBEE012	3/4	x 6	1 1/2	2 13/16	21/32	17 3/4	5000	3.90
TBEE012-2	3/4	x 9	1 1/2	2 13/16	21/32	20 3/4	5000	4.60
TBEE012-3	3/4	x 12	1 1/2	2 13/16	21/32	23 3/4	5000	5.30
TBEE014	7/8	x 12	1 11/16	3 1/4	3/4	27 1/4	7000	7.60
TBEE100	1	x 6	1 13/16	3 9/16	7/8	21 1/4	10000	7.50
TBEE100-2	1	x 12	1 13/16	3 9/16	7/8	26 5/8	10000	10.00

## STUB ENDS

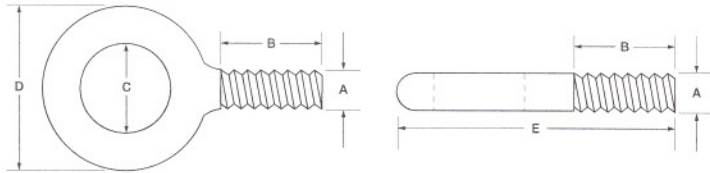


Part No.	Turnbuckle		Overall Closed Length	Nut End B	Length of One Stub (Inches)	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
	Thread Dia. A	Take Up T					
TBA01	3/8	x 6	15 7/8	9/16	8	1200	0.78
TBA03	1/2	x 3	12 7/8	15/16	8	2200	1.38
TBA04	1/2	x 4	13 9/16	25/32	8	2200	1.68
TBA05	1/2	x 6	15 9/16	25/32	8	2200	1.38
TBA06	1/2	x 9	20 3/8	25/32	9 1/2	2200	1.75
TBA07	1/2	x 12	24 9/16	25/32	11	2200	2.25
TBAX8	5/8	x 3	12 7/8	15/16	8	3500	2.14
TBA08	5/8	x 4	13 7/8	15/16	8	3500	2.18
TBA09	5/8	x 6	15 7/8	15/16	8	3500	2.23
TBA10	5/8	x 9	20 3/8	15/16	9 1/2	3500	2.90
TBA11	5/8	x 12	24 7/8	15/16	11	3500	3.20
TBA13	3/4	x 6	16 1/2	1 1/16	8 1/2	5200	3.28
TBA14	3/4	x 9	21 1/8	1 1/16	10	5200	4.05
TBA15	3/4	x 12	25 5/8	1 1/16	11 1/2	5200	4.81
TBA18	7/8	x 6	17 5/8	1 5/16	9	7200	4.50
TBA19	7/8	x 12	26 7/8	1 7/16	12	7200	6.70
TBA21	1	x 6	18 3/8	1 7/16	9 1/2	9300	6.32
TBA22	1	x 12	27 3/8	1 7/16	12 1/2	9300	8.90



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Part No.	A	B	C	D	Reference E	Rated Capacity	Unit Weight (Lbs.)
BEP004	1/4	1	3/4	1 3/16	2.22	500	0.06
BEP005	5/16	1 1/8	7/8	1 7/16	2.60	900	0.11
BEP006	3/8	1 1/4	1	1 21/32	3.00	1300	0.15
BEP007	7/16	1 3/8	1 3/32	1 27/32	3.25	1800	0.21
BEP008	1/2	1 1/2	1 3/16	2 1/16	3.69	2400	0.30
BEP009	9/16	1 5/8	1 9/32	2 9/32	3.93	3000	0.55
BEP010	5/8	1 3/4	1 3/8	2 1/2	4.38	4000	0.61
BEP012	3/4	2	1 1/2	2 13/16	4.88	5000	0.98
BEP014	7/8	2 1/4	1 11/16	3 1/4	5.50	7000	1.53
BEP100	1	2 1/2	1 13/16	3 9/16	6.13	9000	2.06
BEP102	1 1/8	2 3/4	2	4	6.88	12000	2.96
BEP104	1 1/4	3	2 3/16	4 7/16	7.50	15000	4.11
BEP108	1 1/2	3 1/2	2 1/2	5 3/16	8.75	21000	6.73
BEP112	1 3/4	3 3/4	2 7/8	6 1/16	9.81	28000	11.00
BEP200	2	4	3 1/4	6 7/8	11.00	38000	16.25
BEP208	2 1/2	5	4	8 9/16	13.63	56000	28.00



## EYEBOLTS: PLAIN

**Material:** C-1030, Stainless Steel

**Threads:** U.N.C./U.N.F. Class 2A, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

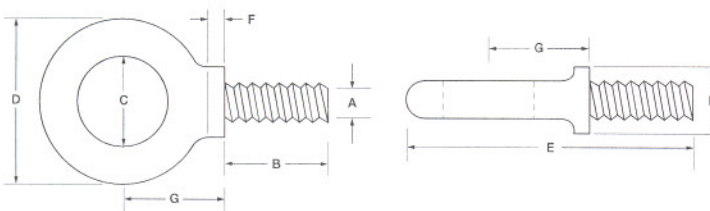
**Options:** Longer Shank Lengths, Special Threading, Other Alloys

**Specifications:** IFI Standards ASTM A489, ANSI/ASME B18.15

**Note:** 2-1/2 Thread Run-Out on Threaded Portion

**WARNING:** Rated capacity is dramatically reduced when load capacity at any angle. Loading must never be made at an angle greater than 45° from the bolt centerline. Rated capacity is reduced to 25% of the tabulated value at an angle of 45°.

Part No.	A	B	C	D	Reference E	F	G	H	Rated Capacity	Unit Weight (Lbs.)
BES004	1/4	1	3/4	1 3/16	2.38	5/32	13/16	17/32	500	0.06
BES005	5/16	1 1/8	7/8	1 7/16	2.82	11/64	31/32	19/32	900	0.11
BES006	3/8	1 1/4	1	1 21/32	3.28	3/16	1 5/32	11/16	1300	0.18
BES006-001	3/8	3/4	1	1 21/32	2.78	3/16	1 5/32	11/16	1300	0.18
BES006-002	3/8	5/8	1	1 21/32	2.66	3/16	1 5/32	11/16	1300	0.20
BES007	7/16	1 3/8	1 3/32	1 27/32	3.60	13/64	1 5/16	25/32	1800	0.23
BES008	1/2	1 1/2	1 3/16	2 1/16	4.00	7/32	1 7/16	7/8	2400	0.35
BES008-001	1/2	1	1 3/16	2 1/16	3.50	7/32	1 7/16	7/8	2400	0.33
BES009	9/16	1 5/8	1 9/32	2 9/32	4.38	15/64	1 19/32	31/32	3000	0.47
BES010	5/8	1 3/4	1 3/8	2 1/2	4.75	1/4	1 23/32	1 1/16	4000	0.70
BES010-001	5/8	1 1/4	1 3/8	2 1/2	4.25	1/4	1 23/32	1 1/16	4000	0.61
BES012	3/4	2	1 1/2	2 13/16	5.28	5/16	1 29/32	1 1/4	5000	1.10
BES012-001	3/4	1 1/2	1 1/2	2 13/16	4.78	5/16	1 29/32	1 1/4	5000	1.00
BES014	7/8	2 1/4	1 11/16	3 1/4	5.97	3/8	2 3/16	1 7/16	7000	1.70
BES100	1	2 1/2	1 13/16	3 9/16	6.65	13/32	2 13/32	1 9/16	9000	2.36
BES102	1-1/8	2 3/4	2	4	7.53	15/32	2 23/32	1 11/16	12000	3.41
BES104	1-1/4	3	2 3/16	4 7/16	8.22	1/2	2 15/16	1 7/8	15000	4.68
BES108	1-1/2	3 1/2	2 1/2	5 3/16	9.47	9/16	3 7/16	2 3/16	21000	7.77
BES112	1-3/4	3 3/4	2 7/8	6 1/16	10.81	5/8	3 31/32	2 1/2	28000	11.35
BEP200	2	4	3 1/4	6 7/8	11.88	3/4	4 1/2	2 7/8	38000	16.70



## EYEBOLTS: SHOULDER

**Material:** C-1030, Stainless Steel

**Threads:** U.N.C. Class 2A, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

**Options:** Longer Shank Lengths, Special Threading, Other Alloys

**Specifications:** IFI Standards ASTM A489, ANSI/ASME B18.15

**Note:** 2-1/2 Thread Run-Out on Threaded Portion

**Eyebolts meet ASTM A489, ANSI/ASME B18.15**



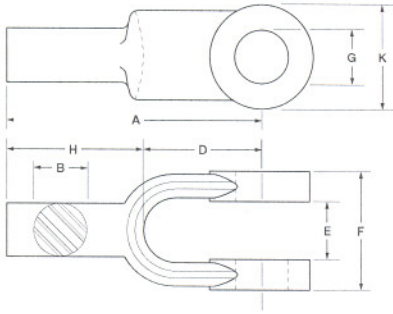
## YOKE ENDS: PLAIN

**Material:** C-1030

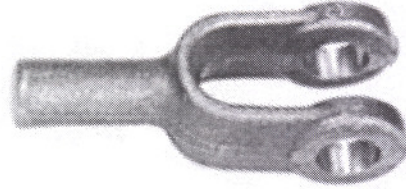
**Threads:** U.N.C. / U.N.F. Class 2A, Right or Left Hand

**Finish:** Self-Colored, Plated

**Options:** Special Machining and Threading



Part No.	Dimensions In Inches								Unit Weight (Lbs.)
	A	B	D	E	F	G	H	K	
YP004	1 3/4	1/4	5/8	9/32	5/8	1/4	1 1/8	1/2	0.05
YP005	2	5/16	3/4	11/32	3/4	5/16	1 1/4	19/32	0.08
YP006	2 1/8	3/8	27/32	7/16	7/8	3/8	1 9/32	11/16	0.11
YP007	2 1/4	7/16	1	1/2	1	7/16	1 1/4	13/16	0.18
YP008	2 1/2	1/2	1 1/8	9/16	1 1/8	1/2	1 3/8	15/16	0.24
YP010	2 7/8	5/8	1 7/16	11/16	1 3/8	5/8	1 7/16	1 3/16	0.46
YP012	3 5/8	3/4	1 11/16	13/16	1 5/8	3/4	1 15/16	1 7/16	1.15
YP014	4	7/8	2	15/16	1 7/8	7/8	2	1 11/16	1.25
YP100	6	1	2 1/2	1 1/16	2 1/8	1	3 1/2	1 15/16	3.4



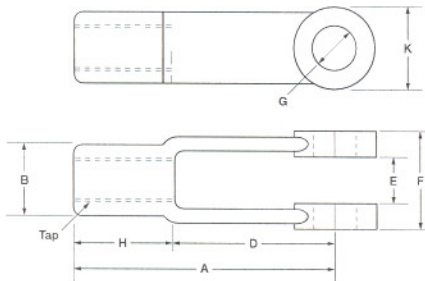
## YOKE ENDS: ADJUSTABLE

**Material:** C-1030

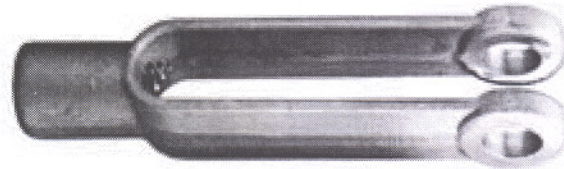
**Threads:** U.N.C. / U.N.F. Class 2B, Right or Left Hand

**Finish:** Self-Colored, Plated

**Options:** Special Machining and Threading



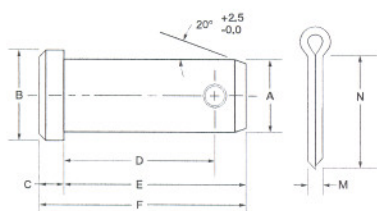
Part No.	Dimensions In Inches								Tap Thread	Unit Weight (Lbs.)
	A	B	D	E	F	G	H	K		
YA004	2	7/16	1 1/4	9/32	5/8	1/4	3/4	1/2	1/4	0.07
YA005	2 1/4	1/2	1 7/16	11/32	3/4	5/16	13/16	19/32	5/16	0.11
YA006	2 1/2	5/8	1 5/8	7/16	7/8	3/8	7/8	11/16	3/8	0.17
YA007	2 7/8	23/32	1 7/8	1/2	1	7/16	1	13/16	7/16	0.24
YA008	3	13/16	1 7/8	9/16	1 1/8	1/2	1 1/8	15/16	1/2	0.39
YA010	4 15/16	1 1/16	3 11/16	11/16	1 3/8	5/8	1 1/4	1 3/16	5/8	0.85
YA012	6 1/16	1 1/4	4 9/16	13/16	1 5/8	3/4	1 1/2	1 7/16	3/4	1.15



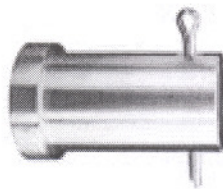
## YOKE PINS

**Material:** C-1030

**Finish:** Self-Colored, Plated

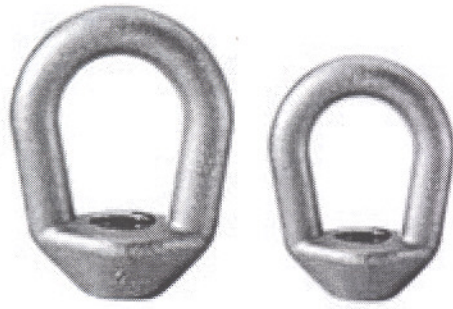


Part No.	Dimensions In Inches						Cotter Pin		Unit Weight (Lbs.)
	A	B	C	Min. D	E	F	M	N	
PY004	1/4	3/8	3/32	43/64	49/64	55/64	1/16	7/16	0.02
PY005	5/16	7/16	3/32	13/16	15/16	1 1/32	3/32	1/2	0.03
PY006	3/8	1/2	1/8	15/16	1 1/16	1 3/16	3/32	5/8	0.04
PY007	7/16	9/16	5/32	1 1/16	1 3/16	1 11/32	3/32	3/4	0.06
PY008	1/2	5/8	5/32	1 13/64	1 23/64	1 33/64	1/8	7/8	0.09
PY010	5/8	13/16	13/64	1 29/64	1 39/64	1 13/16	1/8	1	1.75
PY012	3/4	15/16	1/4	1 23/32	1 29/32	2 5/32	5/32	1 1/4	3.00



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## EYE NUTS

**Material:** C-1030, Stainless Steel

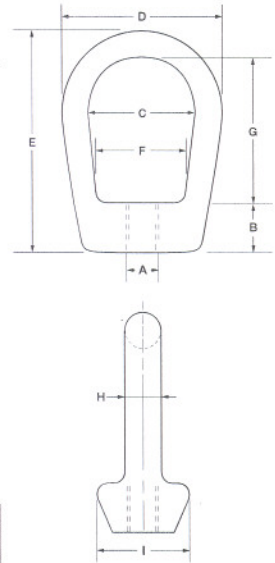
**Threads:** U.N.C./U.N.F. Class 2B, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

**Options:** Other Alloys; Heat Treating, Special Threading

**Note:** Not Recommended For Lifting.

Part No. Tapped RH	Tap Size A	Bail Size	Thread Length B	I. D. C	O. D. D	Overall Length E	Bell F	I. D. Length G	Bail Thickness H	Shoulder Width I	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
NE05-1	3/8	1/2	5/8	1 1/4	1 3/4	2 1/2	13/16	1 9/16	3/8	31/32	2900	0.26
NE05-2	1/2	1/2	5/8	1 1/4	1 3/4	2 1/2	13/16	1 9/16	3/8	31/32	3500	0.31
NE10-1	3/8	1	11/16	1 1/2	2 1/4	3 3/16	1 3/16	2	1/2	1 3/8	2900	0.63
NE10-2	1/2	1	11/16	1 1/2	2 1/4	3 3/16	1 3/16	2	1/2	1 3/8	5200	0.61
NE10-3	5/8	1	11/16	1 1/2	2 1/4	3 3/16	1 3/16	2	1/2	1 3/8	5500	0.59
NE10-4	3/4	1	11/16	1 1/2	2 1/4	3 3/16	1 3/16	2	1/2	1 3/8	5500	0.56
NE20-1	7/8	2	1	2	3 1/4	4 3/8	1 11/16	2 5/8	3/4	1 15/16	11000	1.72
NE20-2	1	2	1	2	3 1/4	4 3/8	1 11/16	2 5/8	3/4	1 15/16	11000	1.67
NE30-1	1 1/8	3	1 1/4	2 1/2	4 1/4	5 5/8	1 13/16	3 3/8	1	2 3/8	20000	3.64
NE30-2	1 1/4	3	1 1/4	2 1/2	4 1/4	5 5/8	1 13/16	3 3/8	1	2 3/8	20000	3.55
NE30-3	1 1/2	3	1 1/4	2 1/2	4 1/4	5 5/8	1 13/16	3 3/8	1	2 3/8	22000	3.45
NE40-1	1 3/4	4	2 1/4	4	6 1/2	10	4	6 1/4	1 1/2	4	40000	16.57
NE40-2	2	4	2 1/4	4	6 1/2	10	4	6 1/4	1 1/2	4	42000	16.14
NE40-3	2 1/4	4	2 1/4	4	6 1/2	10	4	6 1/4	1 1/2	4	45000	15.62
NE40-4	2 1/2	4	2 1/4	4	6 1/2	10	4	6 1/4	1 1/2	4	52000	15.06



Maximum Working Loads Has Been Estimated With A Safety Factor 5:1



## EYE NUTS

**Material:** C-1030, Stainless Steel

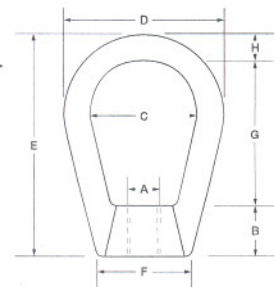
**Threads:** U.N.C. Class 2B, Right or Left Hand, Metric

**Finish:** Self-Colored, Galvanized, Plated, Electro-Polished

**Options:** Other Alloys; Heat Treating, Special Threading

**Note:** Not Recommended For Lifting

Part No. Tapped RH	Tap Size A	Thread Length B	I. D. C	O. D. D	Overall Length E	Bell F	I. D. Length G	Bail Thickness H	Rated Capacity (Lbs.)	Unit Weight (Lbs.)
NES05-01	3/8	5/8	1 1/4	2	2 1/2	7/8	1 1/2	3/8	2700	0.25
NES05-02	1/2	5/8	1 1/4	2	2 1/2	7/8	1 1/2	3/8	2700	0.30
NES10-01	5/8	3/4	1 1/2	2 1/2	3	1 3/8	1 3/4	1/2	5000	0.50
NES10-02	3/4	3/4	1 1/2	2 1/2	3	1 3/8	1 3/4	1/2	5000	0.55
NES20-01	7/8	1	2 1/4	4	5	1 9/16	3	7/8	10000	2.00
NES20-02	1	1	2 1/4	4	5	1 9/16	3	7/8	10000	2.00

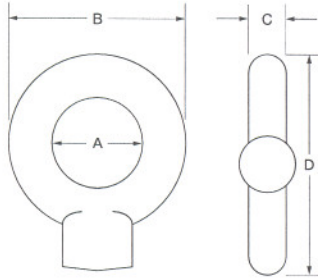


## PAD EYES

**Material:** C-1035

**Finish:** Self-Colored

**Note:** Not Recommended for Lifting



Part No.	Width Shoulder A	I.D. Eye C	O.D. Eye D	Overall Length E	Unit Weight (Lbs.)
EP008200	1/2	1/2	15/16	1 5/32	0.04
EP010200	9/16	5/8	1 13/16	1 9/16	0.08
EP012200	1/2	3/4	1 13/16	1 3/8	0.05
EP014200	9/16	7/8	1 7/16	1 11/16	0.09
EP100200	5/8	1	1 11/16	2	0.13
EP103200	7/8	1 3/16	2 1/8	2 7/16	0.29
EP106200	1	1 3/8	2 9/16	3	0.56
EP108200	1 1/8	1 1/2	2 13/16	3 1/4	0.86



Widely Used On Farm Machinery, Trucks, Steel Hulled Marine Vessels And Material Handling Equipment

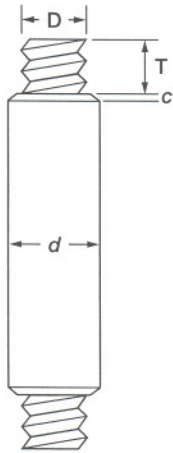
## RECESSED NUTS & PINS

**Material:** ASTM A-36, 4140, Stainless Steel

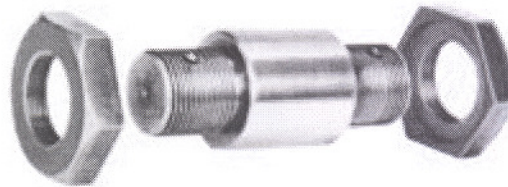
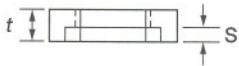
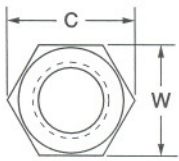
**Threads:** U.N.C., Class 2A, Right or Left Hand

**Finish:** Self-Colored, Plated

**Options:** Special Machining and Threading



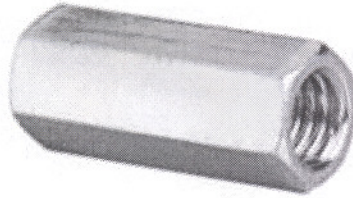
Pin Diameter	Thread	NUT (Suggested Dimensions)										
		Recess		Rough Diameter		Depth		Diameter Rough Hole		Unit Weight (Lbs.)		
Sizes d	Diameter (In.) D	Length T	c	t	W	C	Rough Diameter	Depth s	Diameter Rough Hole	Unit Weight (Lbs.)		
2	2 1/4	1 1/2	1	1/8	7/8	3	3 3/8	2 5/8	1/4	1 1/4	1	
2 1/2	2 3/4	2	1 1/8	1/8	1	3 5/8	4 1/8	3 1/8	1/4	1 3/4	2	
3	3 1/4	3 1/2	2 1/2	1 1/4	1 1/8	4 3/8	5	3 7/8	3/8	2 1/4	3	
3 3/4	4	3	1 3/8	1/4	1 1/4	4 7/8	5 5/8	4 3/8	3/8	2 3/4	4	
4 1/4	4 1/2	4 3/4	3 1/2	1 1/2	1/4	1 3/8	5 3/4	6 5/8	5 1/4	1/2	3 1/4	5
5	5 1/2	4	1 5/8	1/4	1 1/2	6 1/4	7 1/4	5 3/4	1/2	3 3/4	6	
5 1/2	5 3/4	6	4 1/2	1 3/4	1/4	1 5/8	7	8 1/8	6 1/2	5/8	4 1/4	8
6 1/4	6 1/2	5	1 7/8	3/8	1 3/4	7 5/8	8 7/8	7	5/8	4 3/4	10	
6 3/4	7	5 1/2	2	3/8	1 7/8	8 1/8	9 3/8	7 1/2	3/4	5 1/4	12	
7 1/4	7 1/2	5 1/2	2	3/8	1 7/8	8 5/8	10	8	3/4	5 1/4	14	
7 3/4	8	8 1/4	6	2 1/4	3/8	2 1/8	9 3/8	10 7/8	8 3/4	3/4	5 3/4	19
8 1/2	8 3/4	9	6	2 1/4	3/8	2 1/8	10 1/4	11 7/8	9 5/8	3/4	5 3/4	24
9 1/4	9 1/2	6	2 3/8	3/8	2 1/4	11 1/4	13	10 5/8	3/4	5 3/4	32	
9 3/4	10	6	2 3/8	3/8	2 1/4	11 1/4	13	10 5/8	3/4	5 3/4	32	



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Part No.	Thread Diameter (Inches) D	x	Length (Inches) L	Width (Inches) W	Unit Weight (Lbs.)
NS012	3/4	x	5	1 1/4	1.31
NS014	7/8	x	7	1 3/8	2.06
NS100	1	x	7	1 5/8	3.00
NS104	1 1/4	x	7 1/2	2	4.76
NS108	1 1/2	x	8	2 1/4	6.00
NS200	2	x	9	3 1/4	13.56

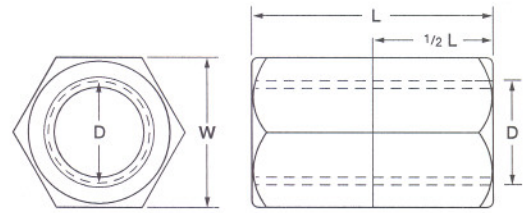


## NUTS: LONG COUPLING

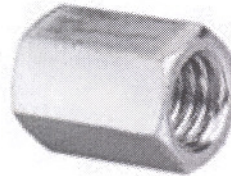
**Material:** 12L14 Carbon Steel, Stainless Steel

**Threads:** U.N.C. Class 2B, Right or Left Hand

**Finish:** Self-Colored, Galvanized, Plated



Part No.	Thread Diameter (Inches) D	x	Length (Inches) L	Width (Inches) W	Unit Weight (Lbs.)
NC006	3/8	x	1 3/4	5/8	0.11
NC008	1/2	x	1 1/4	5/8	0.06
NC010	5/8	x	2 1/8	13/16	0.16
NC012	3/4	x	2 1/4	1	0.28
NC014	7/8	x	2 1/2	1 1/4	0.55
NC100	1	x	2 3/4	1 3/8	0.71
NC102	1 1/8	x	3	1 5/8	1.20
NC104	1 1/4	x	3	1 5/8	0.95
NC106	1 3/8	x	3 3/8	1 7/8	1.44
NC108	1 1/2	x	3 1/5	2	1.87
NC112	1 3/4	x	5	2 3/8	3.60
NC200	2	x	4 1/2	2 3/4	4.50
NC204	2 1/4	x	5	3 1/4	7.40
NC208	2 1/2	x	5 1/2	3 1/2	8.90
NC212	2 3/4	x	6 1/2	4	11.50
NC300	3	x	6 3/4	4	13.80



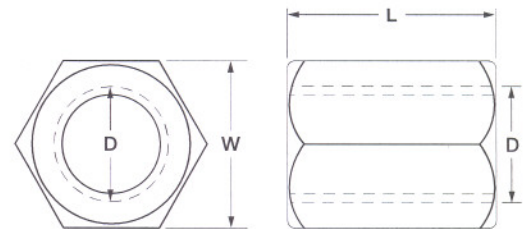
## NUTS: STANDARD COUPLING

**Material:** 12L14 Carbon Steel, Stainless Steel

**Threads:** U.N.C./U.N.F. Class 2B, Right or Left Hand

**Finish:** Self-Colored, Galvanized, Plated

**Note:** To 4" Rod Diameter



Part No.	Thread Diameter (Inches)	Width Across Basic W	Width Across Corner		Weight Per 100
			Min	Max	
NJ006	3/8	11/16	0.794	0.763	1.05
NJ008	1/2	7/8	1.010	.969	2.62
NJ010	5/8	1 1/16	1.227	1.175	4.93
NJ012	3/4	1 1/4	1.443	1.382	7.70
NJ100	1	1 5/8	1.876	1.796	17.60
NJ102	1 1/8	1 13/16	2.093	2.002	24.70
NJ104	1 1/4	2	2.309	2.209	36.10
NJ106	1 3/8	2 3/16	2.526	2.416	47.90
NJ108	1 1/2	2 3/8	2.742	2.622	60.90
NJ110	1 5/8	2 9/16	2.959	2.826	74.40
NJ112	1 3/4	2 3/4	3.175	3.035	95.20
NJ114	1 7/8	2 15/16	3.392	3.242	117
NJ200	2	3 1/8	3.608	3.449	139
NJ204	2 1/4	3 1/2	4.041	3.862	202
NJ208	2 1/2	3 7/8	4.474	4.275	303
NK212	2 3/4	4 1/4	4.907	4.688	395
NJ300	3	4 5/8	5.340	5.102	509



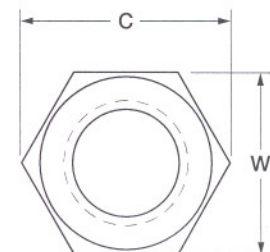
## NUTS: HEX JAM

**Material:** ASTM A-563 Carbon Steel, Stainless Steel

**Threads:** U.N.C. Class 2B, Right or Left Hand

**Finish:** Self-Colored, Galvanized, Plated

**Note:** To 4" Rod Diameter



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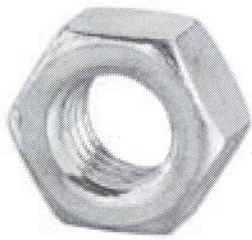
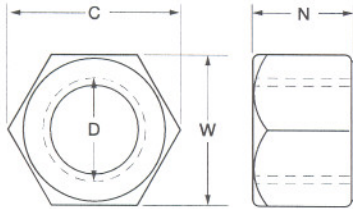
## NUTS: HEAVY HEX

**Material:** ASTM A-563 Carbon Steel,  
Stainless Steel

**Threads:** U.N.C./U.N.F. Class 2B,  
Right or Left Hand

**Finish:** Self-Colored, Galvanized, Plated

**Note:** To 4" Rod Diameter



Part No.	Thread Diameter (Inches) D	Width Across Basic W	Width Across Corner C		Thickness Basic N	Weight Per 100
			Min	Max		
NE004	1/4	1/2	0.577	0.556	15/64	1.16
NE005	5/16	9/16	0.650	0.622	19/64	1.72
NE006	3/8	11/16	0.794	0.763	23/64	3.14
NE007	7/16	3/4	0.866	0.830	27/64	4.16
NE008	1/2	7/8	1.010	0.969	31/64	6.54
NE009	9/16	15/16	1.083	1.037	35/64	8.15
NE010	5/8	1 1/16	1.227	1.175	39/64	11.90
NE012	3/4	1 1/4	1.443	1.382	47/64	19.30
NE014	7/8	1 7/16	1.660	1.589	55/64	29.70
NE100	1	1 5/8	1.876	1.796	63/64	42.50
NE102	1 1/8	1 13/16	2.093	2.002	1 7/64	59.20
NE104	1 1/4	2	2.309	2.209	1 7/32	78.60
NE106	1 3/8	2 3/16	2.526	2.416	1 11/32	102.00
NE108	1 1/2	2 3/8	2.742	2.622	1 15/32	131
NE110	1 5/8	2 9/16	2.959	2.828	1 19/32	162
NE112	1 3/4	2 3/4	3.175	3.035	1 23/32	204
NE114	1 7/8	2 15/16	3.392	3.242	1 27/32	241
NE200	2	3 1/8	3.608	3.449	1 31/32	299
NE204	2 1/4	3 1/2	4.041	3.862	2 13/64	419
NE208	2 1/2	3 7/8	4.474	4.275	2 29/64	564
NE212	2 3/4	4 1/4	4.907	4.688	2 45/64	738
NE300	3	4 5/8	5.340	5.102	2 61/64	950
NE304	3 1/4	5	5.774	5.515	3 3/16	950
NE305	3 1/2	5 3/8	6.207	5.928	3 7/64	1526
NE312	3 3/4	5 3/4	6.640	6.341	3 11/64	1526
NE400	4	6 1/8	7.073	6.755	3 15/16	2180

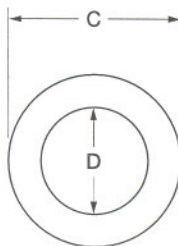
## WASHERS: FLAT PLATE

**Thickness:** 0.019 through 1

**Material:** Carbon, Alloy, Stainless Steel

**Finish:** Self-Colored, galvanized, Plated,  
Electro-polished

**Note:** To 4" Rod Diameter



Part No.	Rod Size (Inches)	Outside Diameter C	Inside Diameter D	Weight Per 100
WF006	3/8	1	7/16	14.9
WF008	1/2	1 3/8	9/16	38.5
WF010	5/8	1 3/4	1 1/16	77
WF012	3/4	2	1 3/16	110
WH100	1	2 1/2	1 1/16	188
WH102	1 1/8	2 3/4	1 1/4	220
WF104	1 1/4	3	1 3/8	260
WF106	1 3/8	3 1/4	1 1/2	333
WF108	1 1/2	3 1/2	1 5/8	385
WF110	1 5/8	3 3/4	1 3/4	448
WF112	1 3/4	4	1 7/8	500
WF114	1 7/8	4 1/4	2	569
WH200	2	4 1/2	2 1/8	630
WF204	2 1/4	4 3/4	2 3/8	826
WF208	2 1/2	5	2 5/8	961
WF212	2 3/4	5 1/4	2 7/8	1100
WF300	3	5 1/2	3 1/8	1300

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