


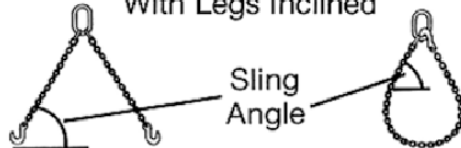




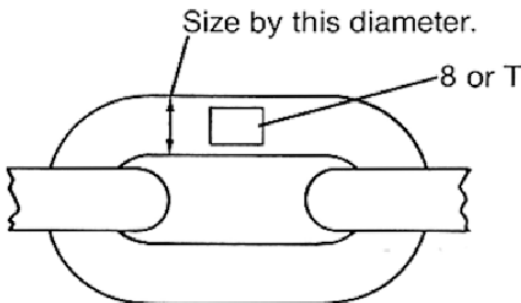
# **Rigging Figure Booklet (for Online Practice Questions)**

**May 2018**

## Chain Slings

GRADE T (8) ALLOY STEEL						
Chain Size (Inches)	Working Load Limit in pounds					
	Single Vertical Hitch	Single Choker Hitch	Single Basket Hitch (Vertical Legs)	2-Leg Bridle Hitch & Single Basket Hitch With Legs Inclined		
						
				60°	45°	30°
1/4	2,800	2,100	5,600	4,850	3,959	2,800
3/8	5,680	4,260	11,360	9,838	8,032	5,680
1/2	9,600	7,200	19,200	16,627	13,574	9,600
5/8	14,480	10,860	28,960	25,079	20,475	14,480
3/4	22,640	16,980	45,280	39,212	32,013	22,640
7/8	27,360	20,520	54,720	47,388	38,687	27,360
1	38,160	28,620	76,320	66,093	53,958	38,160
1 1/4	57,840	43,380	115,680	100,179	81,786	57,840

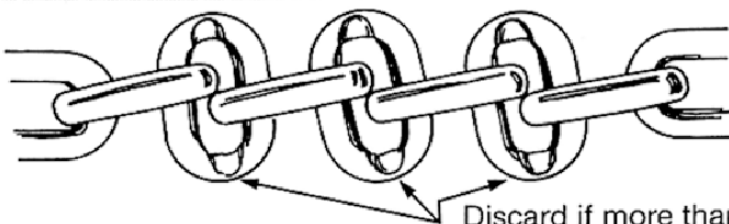
Size by this diameter.



Use only alloy steel chain. Links will be stamped with 8 or T.

When using a 2-leg bridle in a choker hitch configuration, multiply the above values by **.75**.




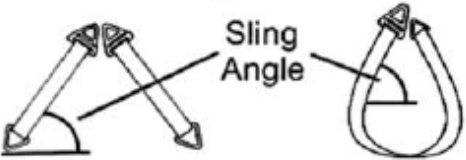
When using a double basket hitch configuration, multiply the above values by **2**.







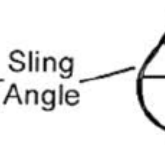

Discard if more than 10% wear at bearing surfaces.

Note: For training and assessment use only.

## Nylon Web Slings

6800 lb/in Material						
Web Width (Inches)	Working Load Limit in pounds					
	Single Vertical Hitch	Single Choker Hitch	Single Basket Hitch (Vertical Legs)	2-Leg Bridle Hitch & Single Basket Hitch With Legs Inclined		
						
				60°	45°	30°
1	1,100	825	2,200	1,905	1,555	1,100
2	2,200	1,650	4,400	3,810	3,110	2,200
3	3,300	2,475	6,600	5,715	4,665	3,300
4	4,400	3,300	8,800	7,620	6,220	4,400
5	5,500	4,125	11,000	9,525	7,775	5,500
6	6,600	4,950	13,200	11,430	9,330	6,600
				When using a 2-leg bridle in a choker hitch configuration, multiply the above values by .75.		
				When using a double basket hitch configuration, multiply the above values by 2.		
Note: Capacities are for flat eye, twisted eye and triangle fittings. For training and assessment use only.						

## Wire Rope Slings

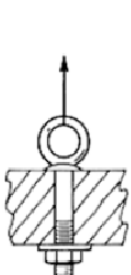
6 x 19 Classification Group, Improved Plow Steel, IWRC						
Rope Diameter (Inches)	Working Load Limit in pounds					
	Single Vertical Hitch	Single Choker Hitch	Single Basket Hitch (Vertical Legs)	2-Leg Bridle Hitch & Single Basket Hitch With Legs Inclined		
						
				60°	45°	30°
3/16	650	480	1,300	1,100	900	650
1/4	1,150	860	2,300	2,000	1,600	1,150
5/16	1,750	1,300	3,500	3,000	2,500	1,750
3/8	2,550	1,900	5,100	4,400	3,600	2,550
7/16	3,450	2,600	6,900	6,000	4,900	3,450
1/2	4,700	3,500	9,400	8,150	6,650	4,700
9/16	5,700	4,200	11,400	9,900	8,050	5,700
5/8	7,100	5,300	14,200	12,300	10,000	7,100
3/4	10,200	7,650	20,400	17,700	14,400	10,200
7/8	13,750	10,300	27,500	23,800	19,400	13,750
1	17,950	13,450	35,900	31,100	25,400	17,950
1 1/8	22,750	17,000	45,500	39,400	32,200	22,750
1 1/4	28,200	21,200	56,400	48,800	39,900	28,200
1 3/8	34,800	26,100	69,600	60,300	49,200	34,800
1 1/2	41,300	31,000	82,600	71,500	58,400	41,300
				<p>When using a 2-leg bridle in a choker hitch configuration, multiply the above values by <b>.75</b>.</p> <p>When using a double basket hitch configuration, multiply the above values by <b>2</b>.</p>		
Note: For training and assessment use only.						

## Eye Bolts

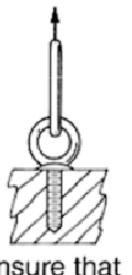
Stock Diameter (Inches)	Working Load Limit in pounds			
	Vertical	60°	45°	Less than 45°
1/4	500	175	125	<b>NOT RECOMMENDED</b>
5/16	800	280	200	
3/8	1,200	420	300	
1/2	2,200	770	550	
5/8	3,500	1,225	875	
3/4	5,200	1,820	1,300	
7/8	7,200	2,520	1,800	
1	10,000	3,500	2,500	
1 1/4	15,200	5,320	3,800	
1 1/2	21,400	7,490	5,350	

### SHOULDER BOLTS

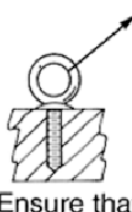
**Correct for Shoulder Eye and Ring Bolts**  
Providing loads are reduced to account for angular loading




Nut must be properly torqued.



Ensure that bolt is tightened into place.

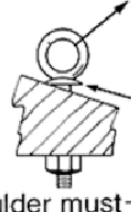


Ensure that tapped hole is deep enough.



Pack with washers to ensure that shoulder is firmly in contact with surface.

**Incorrect**

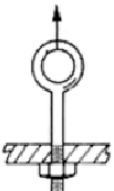


Shoulder must be in full contact with surface.

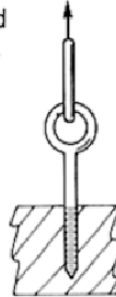
### SHOULDERLESS BOLTS

**Correct**

Shoulderless eye and ring bolts are designed for vertical loads only.



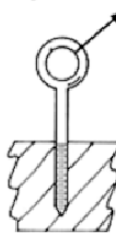
Shoulderless Eye Bolt




Shoulderless Ring Bolt

**Incorrect**

If shoulderless eye and ring bolts are pulled at an angle as shown they will either bend or break

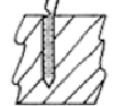


Shoulderless Eye Bolt




Shoulderless Ring Bolt

Results In



Note: For training and assessment use only.

## Shackles

<b>SHACKLES (ALL TYPES)</b> — Weldless Construction — Forged Alloy Steel			Never replace a shackle pin with a bolt.    The load will bend the bolt.
Stock Diameter (Inches)	Inside Width At Pin (Inches)	Max. Safe Working Load Single Vertical Pull (Pounds)	
3/16	3/8	665	
1/4	15/32	1,000	
5/16	17/32	1,500	
3/8	21/32	2,000	
7/16	23/32	3,000	
1/2	13/16	4,000	
5/8	1 1/16	6,500	
3/4	1 1/4	9,500	
7/8	1 7/16	13,000	
1	1 11/16	17,000	
1 1/8	1 13/16	19,000	
1 1/4	2 1/32	24,000	
1 3/8	2 1/4	27,000	
1 1/2	2 3/8	34,000	
1 3/4	2 7/8	50,000	
2	3 1/4	70,000	
2 1/2	4 1/8	100,000	
3	5	150,000	
3 1/2	5 3/4	200,000	
4	6 1/2	260,000	
Size by stock diameter — not pin diameter.			
