



LiftAlloy CHAIN SLING BASICS

Lift-All chain slings meet or exceed all OSHA, ASME B30.9 and NACM standards and regulations.

LiftAlloy chain slings, available in Grade 80 for 7/8"-1 1/4" and Grade 100 for 7/32"-3/4", are recommended for rugged industrial applications in harsh environments where flexibility, abrasion resistance and long life are required. OSHA required annual inspections can be performed by Lift-All trained personnel.

Features, Advantages and Benefits

Promotes Safety

- Permanent steel capacity tag is serialized for identification
- Welded slings offer the security of tamper proof assemblies

Saves Money

- Alloy Steel construction assures long life
- Can be repaired, proof tested and recertified by Lift-All

Saves Time

- Easy to inspect for damage
- Stores easily

Use of Chain Under Heat Conditions

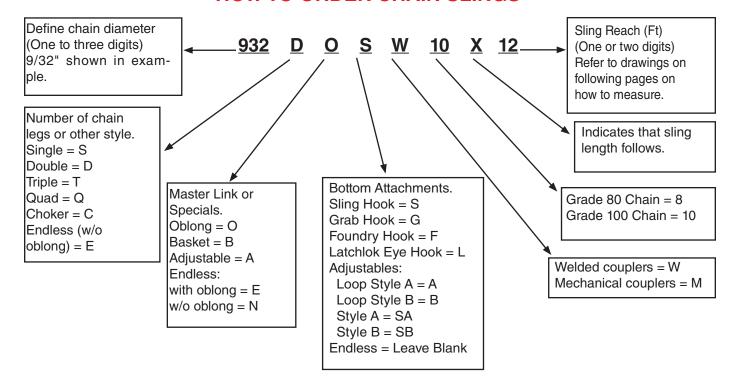
When the chain itself is heated to temperatures shown below, the Working Load Limit (Rated Capacity) should be reduced as indicated.

Temperature	Load Lim	of Working it While at erature	Permanent Reduction of Working Load Limit After Exposure to Temperature		
of Chain (°F)	Grade 80	Grade 100	Grade 80	Grade 100	
Below -40	Do Not Use	Do Not Use	None	None	
Below -20	None	Do Not Use	None	None	
400	10%	15%	None	None	
500	15%	25%	None	5%	
600	20%	30%	5%	15%	
700	30%	40%	10%	20%	
800	40%	50%	15%	25%	
900	50%	60%	20%	30%	
1000	60%	70%	25%	35%	
Over 1000		REMOVE FR	OM SERVICE		

Consult Lift-All about galvanized chain

Consult Lift-All about chain to be used in pickling operations

HOW TO ORDER CHAIN SLINGS





LiftAlloy CHAIN SLING BASICS

LiftAlloy Grade 100

- Available in sizes 7/32" 3/4"
- Higher capacity per chain size can be used as an increased safety factor
- Higher capacity may allow use of smaller diameter chain for your lifts, reducing sling weight and cost
- Extreme abrasion resistance more durable
- Powder coated orange attachments for corrosion resistance

LiftAlloy Grade 80

- Available in sizes 7/8" 1 1/4"
- Greater temperature tolerance

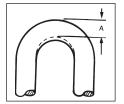
All LiftAlloy Slings

- · Meet or exceed all OSHA, ASTM and NACM standards
- Welded or mechanically assembled

Chain Wear Allowance

Determine wear by measuring cross section at link ends. If worn to less than the minimum thickness allowable, chain should be removed from service.

Chain Size (in.)	Minimum Allowable Thickness - A (in.)
7/32 (.218)	.189
9/32 (.281)	.239
3/8 (.375)	.342
1/2 (.500)	.443
5/8 (.625)	.546
3/4 (.750)	.687
7/8 (.875)	.750
1 (1.00)	.887
1 1/4 (1.250)	1.091



Minimum thickness based on OSHA recommendations.

Rated Capacity For LiftAlloy Chain Slings

	. , , , , , , , , , , , , , , , , , , ,																
			90°	60°	45°	30°	60°	45°	30°								
o	Size of Chair	1								Nominal Dimensions (in.)		Dimensions (in.)		Dimensions (in.)		Approx.	Approx. Weight
Grade	(in.)	(mm)	Single Chain @ 90° (lbs.)	Double	e Chain Sli (lbs.)	ings *	Triple & 0	Quad Chair (lbs.) **	Slings *	Inside Length	Inside Width	Links per ft.	per 100 ft. (lbs.)				
100	7/32	5.5	2,700	4,700	3,800	2,700	7,000	5,700	4,000	.676	.312	17.8	44				
100	9/32	7.0	4,300	7,400	6,100	4,300	11,200	9,100	6,400	0.883	.395	13.6	73				
100	3/8	10.0	8,800	15,200	12,400	8,800	22,900	18,700	13,200	1.247	.574	9.6	144				
100	1/2	13.0	15,000	26,000	21,200	15,000	39,000	31,800	22,500	1.559	.734	7.7	246				
100	5/8	16.0	22,600	39,100	32,000	22,600	58,700	47,900	33,900	1.916	.855	6.3	370				
100	3/4	20.0	35,300	61,100	49,900	35,300	91,700	74,900	53,000	2.397	1.070	5.0	580				
80	7/8	22.0	34,200	59,200	48,400	34,200	88,900	72,500	51,300	2.250	1.137	5.3	776				
80	1	26.0	47,700	82,600	67,400	47,700	123,900	101,200	71,500	2.664	1.348	4.5	995				
80	1 1/4	32.0	72,300	125,200	102,200	72,300	187,800	153,400	108,400	3.250	1.656	3.7	1,571				

* WARNING

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

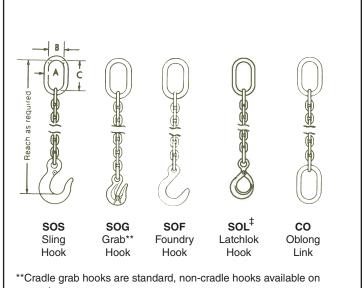
^{*} A quad branch chain sling, especially when used on a load of rigid structure, is usually not sustaining the load evenly distributed on each of its four branches. The maximum working load limits are therefore set at the same values as for triple branch chain slings of equal quality and size and used with branches at same angle of inclination.



LiftAlloy SINGLE CHAIN SLINGS

Grade	Chain Size (in.)	¹ Rated Capacity* Vertical (lbs.)	Approx. Weight 5 foot Reach Type SOS (lbs.)
100	7/32	2,700	4
100	9/32	4,300	5
100	3/8	8,800	10
100	1/2	15,000	18
100	5/8	22,600	27
100	3/4	35,300	44
80	7/8	34,200	58
80	1	47,700	79
80	1 1/4	72,300	121

Note: 1. Also referred to as "Working Load Limit".

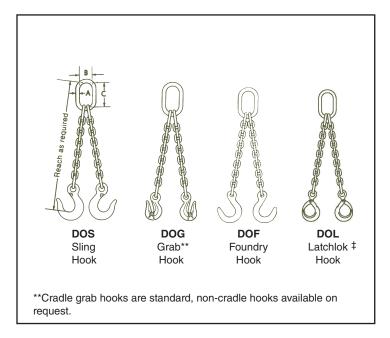


request.

LiftAlloy DOUBLE CHAIN SLINGS

Grade	Chain Size (in.)	¹Rated Capacity* @ 60° (lbs.)	Approx. Weight 5 foot Reach Type DOS (lbs.)
100	7/32	4,700	8
100	9/32	7,400	10
100	3/8	15,200	17
100	1/2	26,000	32
100	5/8	39,100	51
100	3/4	61,100	74
80	7/8	59,200	99
80	1	82,600	134
80	1 1/4	125,200	211

Note: 1. Also referred to as "Working Load Limit".



Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 99 and Effect of Angle chart page 12.

WARNING

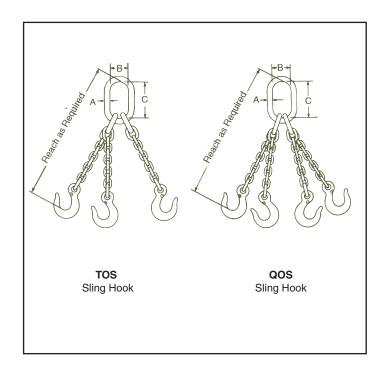
[‡] Not available in Grade 100.



LiftAlloy TRIPLE AND QUAD CHAIN SLINGS

Grade	Chain Size (in.)	¹ Rated Capacity* @ 60° (lbs.) Grade 80	Approx. Weight 5 foot Reach Type TOS (lbs.)	Approx. Weight 5 foot Reach Type QOS (Ibs.)	
100	7/32	7,000	12	16	
100	9/32	11,200	16	19	
100	3/8	22,900	28	36	
100	1/2	39,000	53	63	
100	5/8	58,700	81	100	
100	3/4	91,700	116	140	
80	7/8	88,900	154	187	
80	1	123,900	209	250	
80	1 1/4	187,800	358	406	

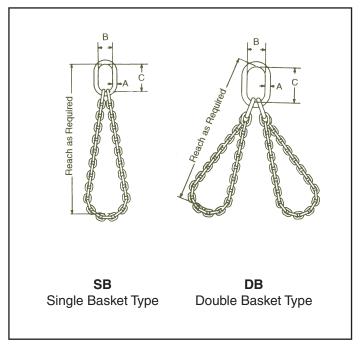
Note: 1. Also referred to as "Working Load Limit".



LiftAlloy BASKET TYPE CHAIN SLINGS

	Chain	¹Rated Capacity* @ 60° (Ibs.)					
Grade	Size (in.)	Single	Double				
100	7/32	4,700	7,000				
100	9/32	7,400	11,200				
100	3/8	15,200	22,900				
100	1/2	26,000	39,000				
100	5/8	39,100	58,700				
100	3/4	61,100	91,700				
80	7/8	59,200	88,900				
80	1	82,600	123,900				
80	1 1/4	125,200	187,800				

Note: 1. Also referred to as "Working Load Limit".





Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 99 and Effect of Angle chart page 12.

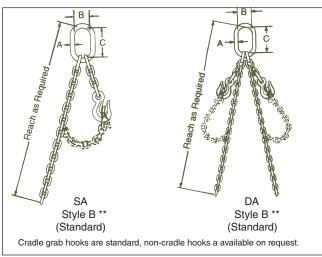




LiftAlloy ADJUSTABLE CHAIN SLINGS (Traditional Styles)

LiftAlloy Adjustable Loop Chain Slings

	Chain	¹Rated Capacity*@ 60° (lbs.)				
Grade	Size (in.)	Single	Double			
100	7/32	4,700	7,000			
100	9/32	7,400	11,200			
100	3/8	15,200	22,900			
100	1/2	26,000	39,400			
100	5/8	39,100	58,700			
100	3/4	61,100	91,700			
80	7/8	59,200	88,900			
80	1	82,600	123,900			
80	1 1/4	125,200	187,800			



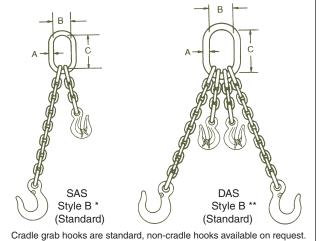
Slings shown here are the most popular of the traditional adjustable type slings.

However, Lift-All's engineering staff can design whatever configuration is required to fit individual needs.

** Style B, single and double adjustable slings are furnished with approximately one (1) foot of chain in short branches unless otherwise specified in the order. Style A, hook is attached to master link with a coupling link.

LiftAlloy Adjustable Chain Slings

	Chain	¹Rated Capacity* (lbs.)				
Grade	Size (in.)	Single @90°	Double @ 60°			
1000	7/32	2,700	4,700			
100	9/32	4,300	7,400			
100	3/8	8,800	15,200			
100	1/2	15,000	26,000			
100	5/8	22,600	39,100			
100	3/4	35,300	61,100			
80	7/8	34,200	59,200			
80	1	47,700	82,600			
80	1 1/4	72,300	125,200			

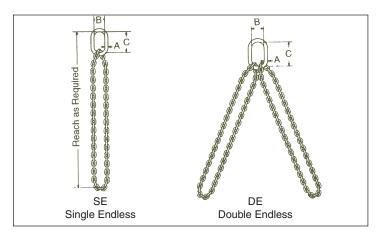




Style A *

LiftAlloy ENDLESS BASKET CHAIN SLINGS

	Chain	¹ Rated Capacity* (lbs.)					
Grade	Size (in.)	Single @90°	Double @ 60°				
100	7/32	2,700	4,700				
100	9/32	4,300	7,400				
100	3/8	8,800	15,200				
100	1/2	15,000	26,000				
100	5/8	22,600	39,100				
100	3/4	35,300	61,100				
80	7/8	34,200	59,200				
80	1	47,700	82,600				
80	1 1/4	72,300	125,200				



Note: 1. Also referred to as "Working Load Limit".

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°.

Refer to chain chart page 99 and Effect of Angle chart page 12.



New, Improved

Master Control Plate *

ADJUST-A-LINK GRADE 100 CHAIN SLINGS

The most easily adjustable and versatile chain sling is now stronger, too! Ideal for machine shop and maintenance departments varied requirements.

Features, Advantages and Benefits

Promotes Safety

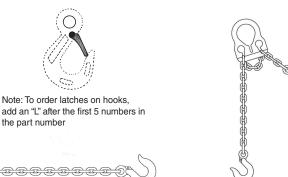
- Chain cannot be removed from the master control plate, assuring the capacity rating will not be compromised
- Alloy steel master control link for strength and reliability
- Each assembly serialized for traceability
- Complies with OSHA proof tested and certified

Saves Money

- Grade 100 chain provides approximately 25% higher capacities than our previous Adjust-A-Links - replaces larger, more expensive slings
- New angled plate design reduces bending torque on chain and plate
 reduces wear and extends sling life
- Wider top bearing surface reduces wear to both plate and crane hook
- Versatile one sling does many jobs
- Using two Adjust-A-Links on the same crane hook eliminates the need for expensive triples and quads
- · Heat treated alloy steel construction for long sling life
- Yellow powder coating on master plate and hooks prevents rust extends sling life

Saves Time

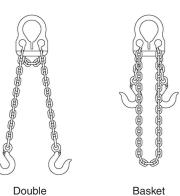
- More compact plate design fits larger hooks for easier rigging
- Less bulky than typical double adjustable chain slings
- High visibility yellow fittings make assembly easy to spot
- Easily adjustable to accommodate a wide range of applications
- No time wasted searching for just the right sling







Master Control Link.



								10 ft. Length		14 ft. Length			
Chain Size (in.)	Single @ 90°	Double @ 60°	Eye Width A	Eye Height B	Overall Width C	Overall Length D	Hook Opening E	Part No.	(lbs.)	Part No.	(lbs.)	Part No.	(lbs.)
7/32	2,700	4,700	2 3/16	2 11/16	3 15/16	5 1/8	15/16	30001G10	4.2	30002G10	6.2		
9/32	4,300	7,400	2 7/8	3 3/16	5 1/16	6 1/2	1 1/16	30003G10	7.5	30004G10	10.5		
3/8	8,800	15,200	3 3/4	4 1/8	6 3/4	8 11/16	1 9/16			30005G10	18.5	30006G10	24.5
1/2	12,000	20,800	4 3/8	4 3/8	9 3/4	12 3/4	2			30007	42	30008	52

^{*} WARNING



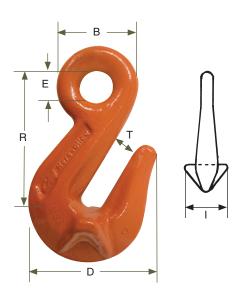
HOOKS, MASTER LINKS, ETC.

Cradle Grab Eye Hook / Code G

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



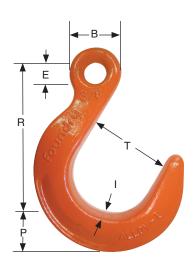
Note: Non-Cradle Grab Hooks are available upon request.



LiftAlloy

Foundry Hook / Code F

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



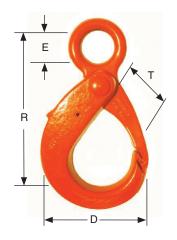
HOOKS, MASTER LINKS, ETC.

Latchlok Eye Hooks / Code L

Grade 100

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

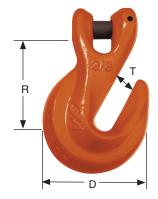
Design factor @ 4:1



Clevis Cradle Grab Hook / Code G

Grade 100

Chain	Rated	D	Weight			
Size (in.)	Capacity* (lbs.)	D R T		Т	Each (lbs.)	
9/32	4,300	2.18	1.86	0.38	0.6	
3/8	8,800	2.71	2.47	0.47	1.3	
1/2	15,000	3.65	3.04	0.60	2.1	
5/8	22,600	4.5	3.75	0.77	4.2	

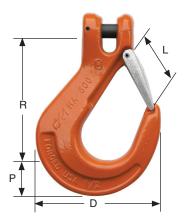


Chain

Clevis Sling Hook with Optional Latch / Code S

Grade 100

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

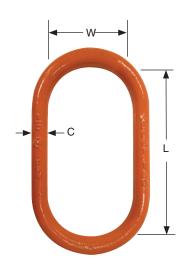




HOOKS, MASTER LINKS, ETC.

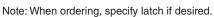
Oblong Master Link / Code O

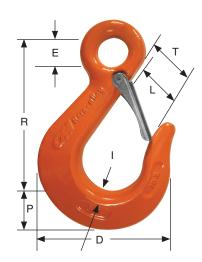
	Link Size * (in.)		Ту	ng			
Diameter Material C	Inside Width W	Inside Length L	Single	Double	Triple	Quad	Weight Each (lbs.)
13/32	1 1/2	3	7/32	7/32	-	-	0.3
1/2	2 1/2	5	9/32	9/32	7/32	7/32	0.9
3/4	3	6	3/8	3/8	9/32	9/32	2.5
1	4	8	1/2 or 5/8	1/2	3/8	3/8	5.8
1 1/4	4 3/8	8 3/4	3/4	5/8	1/2	1/2	9.2
1 1/2	5 1/4	10 1/2	7/8	3/4	5/8	5/8	16
1 3/4	6	12	1	7/8	3/4	3/4	25
2	7	14	1 1/4	1	7/8	7/8	37
2 1/4	8	16	-	1 1/4	1	1	54
2 3/4	9	16	-	-	1 1/4	1 1/4	85



Chain Sling Eye Hook with Optional Latch / Code S

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





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



HOOKS, MASTER LINKS, ETC.

Mechanical Coupling Links

	Chain	Rated		Weight			
Grade	Size (in.)	Capacity* (lbs.)	Α	В	С	Е	Each (lbs.)
100	7/32	2,700	.35	1.19	.69	.54	0.27
100	9/32	4,300	.41	1.94	.70	.59	0.27
100	3/8	8,800	.55	2.99	1.13	.93	0.87
100	1/2	15,000	.75	3.97	1.43	1.12	1.86
100	5/8	22,600	.87	4.50	1.70	1.35	3.14
100	3/4	35,200	1.07	5.36	2.09	1.54	5.80
80	7/8	34,200	1.05	5.13	1.80	1.92	6.30
80	1	47,700	1.25	6.00	2.31	2.37	8.95
80	1 1/4	72,300	1.53	6.81	2.17	2.70	16.40

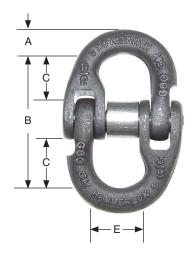
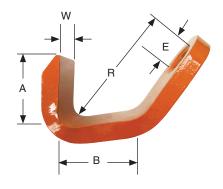


Plate Hook

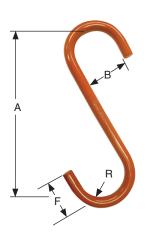
Chain Size	Rated Capacity*		Dimensions (in.)					
(in.)	(lbs.)	Α	В	E	R	W	(lbs.)	
9/32	4,200	2.00	1.75	1.00	3.68	2.50	2.8	
3/8	7,400	2.63	3.00	1.12	6.38	2.75	5.7	
1/2	13,000	3.50	4.00	1.50	7.37	3.50	13	
5/8	20,400	4.38	5.00	1.88	9.25	5.00	27	
3/4	30,000	5.18	6.00	2.25	10.88	5.75	42	
7/8	40,000	6.00	7.00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



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

S Hook

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

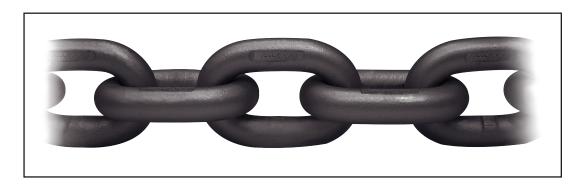


See page 136 for J-Hooks and Custom Engineered Lifting Devices.



LiftAlloy Chain

CHAIN



LiftAlloy Welded Alloy Chain

- Primarily used for overhead lifting slings
- Proof tested
- Black finish on Grade 80
- Gray coating on Grade 100

Welded Carbon Chain

- Grade 30 Proof Coil available as self colored, zinc plated or hot galvanized
- Grade 43 High Test available as bright finish, zinc plated or hot galvanized
- Grade 70 Binding (transport) is furnished with a gold finish as standard

Alloy Chain

Grade	Chain Size (in.)	Rated Capacity* (lbs.)	Weight Per CFT. (lbs.)
100	7/32	2,700	44
100	9/32	4,300	73
100	3/8	8,800	144
100	1/2	15,000	246
100	5/8	22,600	370
100	3/4	35,300	580
80	7/8	34,200	776
80	1	47,700	995
80	1 1/4	72,300	1571

Carbon Chain

	Grade		Grad	le 43	Grade 70		
Chain Size (in.)	Rated Capacity* (lbs.)	Weight Per CFT. (lbs.)	Rated Capacity* (lbs.)	Weight Per CFT. (lbs.)	Rated Capacity* (lbs.)	Weight Per CFT. (lbs.)	
3/16	800	38	-	-	-	-	
1/4	1,300	66	2,600	71	3,150	74	
5/16	1,900	98	3,900	98	4,700	100	
3/8	2,650	144	5,400	144	6,600	156	
1/2	4,500	278	9,200	278	11,300	259	
5/8	6,900	422	13,000	422	-	-	
3/4	10,600	628	20,200	606	-	-	

Note: Grade 30 Proof Coil, Grade 43 High Test and Grade 70 Binding (transport) tiedown chain and their fittings are not recommended for lifting or hoisting per ASME B30.9.

A WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 99 and Effect of Angle chart page 12.



INSPECTION CRITERIA FOR CHAIN

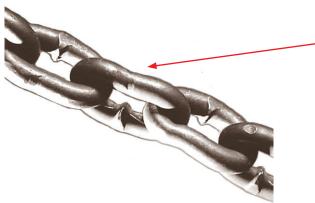
The following photos illustrate some of the common damage that occurs, indicating that the sling must be taken out of service.

* For inspection frequency requirements, see page 7.

THE DAMAGE: **Stretched Chain Links -** Indicates the sling has been extremely overloaded or subjected to shock loading.

WHAT TO LOOK FOR: Lengthening of the links and narrowing of the link width. Links that do not hinge freely with adjacent links are stretched and must be taken our of service, however, stretch **can** occur without this indicator.

TO PREVENT: Avoid overloading and shock loading.



THE DAMAGE: Bent Links

WHAT TO LOOK FOR: Bending usually occurs in only one or two adjacent links. Links will have an irregular shape when compared to other links.

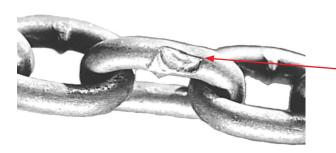
TO PREVENT: Bent links are usually the result of the chain going around the sharp edge of a load during a lift. Load edges must be padded to protect both chain and load.



WHAT TO LOOK FOR: Metallic bumps on any link of chain.

TO PREVENT: The heat from weld spatter can adversely affect the strength of a chain link. Slings must be shielded from welding operations.





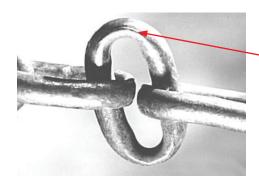
THE DAMAGE: Gouged Links

WHAT TO LOOK FOR: Indentations on an otherwise smooth link surface.

TO PREVENT: Gouging of links is usually caused by heavy loads being dragged over or dropped onto the chain. Protect sling from these situations.

INSPECTION CRITERIA FOR CHAIN





THE DAMAGE: Worn Links

WHAT TO LOOK FOR: Excessive wear and a reduction of the material diameter, especially at the bearing points. Refer to Lift-All Wear Allowance Table for minimum allowable link thickness.

TO PREVENT: Wear is a natural result of sling use. Keeping load weights within the ratings of the slings being used will give the maximum sling wear life.

THE DAMAGE: Bent/Worn/Cracked Hardware

WHAT TO LOOK FOR: Wear of hooks and other fittings usually occurs at the bearing points. Hooks bent more than 10° from the plane of the unbent hook. Hooks opened more than 15% of the normal throat opening.

TO PREVENT: Never point load hooks or lift with hardware on a load edge.





