



CHAIN

Alloy Chain Slings

Types of Chain Slings

ALLOY CHAIN - the components used in welded or mechanical slings meet or exceed all existing OSHA, Federal NACM, ASTM and ISO chain specification requirements. Certificates for OSHA and internal record requirements are available upon request.

The **WORKING LOAD LIMITS** are based on a 4 to 1 design factor required by the International Standards Organization (ISO). Should an extreme load actually deform the chain, it will stretch (elongate) a minimum of 15% before breaking. An embossing of the chain link allow for easy identification of Alloy Chain.

While **Grade 80** is the more commonly used, **Grade 100** usage is increasing.

WELDED CHAIN SLINGS:

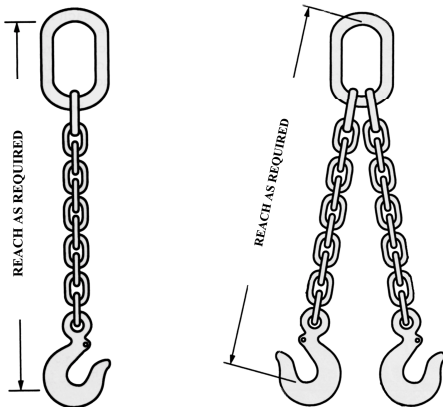
We maintain the specification of each welded sling on file under a unique registration serial number for inspection or should the chain require servicing. The rated capacity of a welded sling cannot be altered since its welded construction prevents on site tampering. Welded slings can be fabricated to your specific needs and are available with a variety of special end attachments.

MECHANICAL CHAIN SLINGS:

This flexible system saves on costly down time, since they can be repaired or altered on site. Components are manufactured under rigid quality control standards and meet or exceed the capacity of Grade 80 Chain.

Every component has forged marking indicating the alloy chain size to be used with it.

How To Order



	TYPE	One End	Other End
Single Chain Sling	SOS	Oblong Link	Sling Hook
	SOG	Oblong Link	Grab Hook
	SGS	Grab Hook	Sling Hook
	SGG	Grab Hook	Grab Hook
	SSS	Sling Hook	Sling Hook
	SOF	Oblong Link	Foundry Hook
	SOO	Oblong Link	Oblong Link
Double Chain Slings	DOS	Oblong Link	Sling Hooks
	DOG	Oblong Link	Grab Hooks
	DOF	Oblong Link	Foundry Hooks
Triple Chain Slings	TOS	Oblong Link	Sling Hooks
	TOG	Oblong Link	Grab Hooks
	TOF	Oblong Link	Foundry Hooks
Quadruple Chain Slings	QOS	Oblong Link	Sling Hooks
	QOG	Oblong Link	Grab Hooks
	QOF	Oblong Link	Foundry Hooks



WARNING

- ASME B30.9.1 requires all new components of alloy lifting chain assemblies to be proofloaded prior to their initial use.
- ASME B30.9.1 requires all repaired alloy lifting chain assemblies incorporating previously used components to be proofloaded prior to their initial use.
- When hot galvanized chain is specified, the recommended work load limits **MUST** be reduced. Please refer such inquiries to our nearest Branch Manager.

The following information is required to process an order or an inquiry:

- 1 **SIZE & GRADE:** This is specified by the size of the material from which the chain is made and is dependent upon the working load limit required.
- 2 **REACH:** This is the length, including attachments, measured from bearing point to bearing point.
- 3 **TYPE:** Select and specify the proper type of sling from the list below. (ex. S - Single O - Oblong Link S - Sling Hook)
- 4 **ATTACHMENTS:** Unless otherwise specified standard master links and hooks as given herein will be used. When other than standard attachments are required, we should be given a complete description or a drawing of the requested substitute.



Alloy Chain Sling Working Load Limits

Grade 80 Alloy Chain Sling Working Load Limits

Chain Size		Single Chain at 90° Lbs.	Double (D) Chain Slings /Lbs.			Triple (T) & Quadruple (Q) Chain Slings /Lbs.		
Inches	mm							
9/32	7	3,500	6,100	4,900	3,500	9,100	7,400	5,200
3/8	10	7,100	12,300	10,000	7,100	18,400	15,100	10,600
1/2	13	12,000	20,800	17,000	12,000	31,200	25,500	18,000
5/8	16	18,100	31,300	25,600	18,100	47,000	38,400	27,100
3/4	20	28,300	49,000	40,000	28,300	73,500	60,000	42,400
7/8	22	34,200	59,200	48,400	34,200	88,900	72,500	51,300
1	26	47,700	82,600	67,400	47,700	123,900	101,200	71,500
1-1/4	32	72,300	125,200	102,200	72,300	187,800	153,400	108,400

NOTE: Working Load Limit should not be exceeded

Grade 100 Alloy Chain Sling Working Load Limits

Chain Size		Single Chain at 90° Lbs.	Double (D) Chain Slings /Lbs.			Triple (T) & Quadruple (Q) Chain Slings /Lbs.		
Inches	mm							
9/32	7	4,300	7,400	6,100	4,300	11,200	9,100	6,400
3/8	10	8,800	15,200	12,400	8,800	22,900	18,700	13,200
1/2	13	15,000	26,000	21,200	15,000	39,000	31,800	22,500
5/8	16	22,600	39,100	32,000	22,600	58,700	47,900	33,900

NOTE: Working Load Limit should not be exceeded

CAUTION: Do not use Grade 80 Fittings with Grade 100 Chain.

Grade 80 & Grade 100 Alloy Chain Specifications

Chain Size		Wire Diameter	Nominal Inside Length		Nominal Inside Width		Weight		Length Per Drum	
Inches	mm		Inches	mm	Inches	mm	Lbs./100 Ft.	kgs/Meter	Feet	Meters
9/32	7	0.279	.870	22.0	.405	10.3	74.0	1.00	800	243.8
5/16	8	0.343	1.010	25.7	0.490	12.4	113.0	1.35	500	152.4
3/8	10	0.404	1.226	31.0	0.560	14.4	143.0	2.13	500	152.4
1/2	13	0.529	1.570	39.9	.750	19.0	269.0	4.00	300	91.44
5/8	16	0.625	1.570	49.0	0.865	21.9	365.0	5.43	200	61.0
3/4*	20	0.801	2.417	61.4	1.134	28.8	580.8	8.64	100	30.5
7/8*	22	0.881	2.661	67.6	1.248	31.7	776.1	11.55	100	30.5
1*	26	1.000	2.900	73.6	1.400	35.5	995.7	14.82	75	22.9
1-1/4*	32	1.250	3.710	94.2	1.670	42.4	1575.0	23.43	60	18.3

*** Grade 100 dimensions may vary.**

To determine which chain size and leg style are best suited to your requirements - use the working load limit table as a guide. The table gives the working load limits of 9/32" through 1-1/4" in 1, 2, 3, and 4 leg styles.

Determine the maximum load you will lift and the angle of the lift involved. Always select a chain

assembly that has a higher working load limit and a lift angle greater than or equal to the desired load and angle.

Working Load Limits of the chain and components are established as pounds applied at the indicated degrees from horizontal.

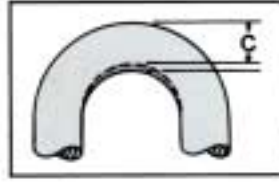


Table of Wear

Chain Size		Minimum Safe Dimension at Worn Part of Link (C)	
Inches	mm	Grade 80	Grade 100
9/32	7 mm	0.239 in.	0.239 in. (6.07 mm)
3/8	10 mm	0.342 in.	0.342 in. (8.69 mm)
1/2	13 mm	0.443 in.	0.443 in. (11.26 mm)
5/8	16 mm	0.546 in.	0.546 in. (13.87 mm)
3/4	20 mm	0.682 in.	-
7/8	22 mm	0.750 in.	-
1	26 mm	0.886 in.	-
1-1/4	32 mm	1.090 in.	-

If thickness at any location on the chain, master link and/or sublink is less than the minimum on this table, remove from service immediately.

Effects of High Temperature on Working Load Limits of Grade 80 Alloy Chain

Temperature of Chain *		Percentage of Permanent Reduction in Working Load Limit **
(Degrees F)	(Degrees C)	
500	260	None
600	316	None
700	371	5%
800	427	15%
900	482	20%
1000	538	25%

*ACCO does not recommend the use of A&A Alloy Chain at temperatures above 500oF
 ** When chain is used at room temperature after being heated to temperatures shown in first column.

Effect of Elevated Temperatures on Grade 100 Alloy Chain

(oF)	(oC)	Reduction of Working Load Limit WHILE at Temperature	Permanent Reduction of Working Load Limit AFTER Exposure
0-400	0-204	None	None
400	204	15%	None
500	260	25%	5%
600	316	30%	15%
700	371	40%	20%
800	427	50%	25%
900	482	60%	30%
1000	538	70%	35%
1000+	538+	Remove From Service	Remove From Service