Alloy Chain Slings

ALLOY CHAIN SLINGS – Superior strength slings, ease of handling and durability. Used in environments having severe lifting conditions such as foundries, steel mills, and heavy machining operations. Chain slings provide the longest sling life in the conditions commonly seen in these environments.

PRODUCT FEATURES

- Registered metal tag attached for identification and traceability.
- Long service life when used properly.
- Can be used in high temperature environments.

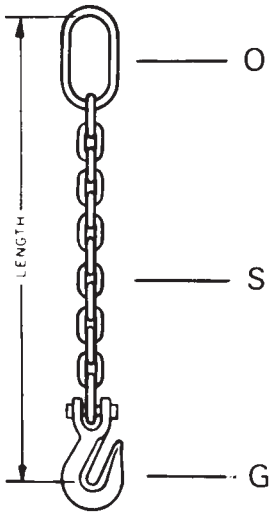
Special Note: Caldwell® alloy chain slings are constructed using the best quality alloy steel, the only type recmmended by OSHA for overhead lifting. A **Registered Identification** Tag is attached to each chain sling. This tag serves as a permanent identification for the life of the sling. Each tag is stamped with the grade, size, reach, type, work load (at a specific angle of lift), and a register number corresponding to the information supplied with the sling invoice. This provides the needed information for user compliance with OSHA requirements, and that all persons involved in the purchase and use of Caldwell® alloy chain slings are aware of the specifications. All chain and component parts are proof tested to twice the catalog rated capacity.

How to Order Caldwell Alloy Steel Chain Slings

Specify

1. Grade of chain - 80 or 100
2. Chain size - inches
3. Number of legs -
   - Single - (S)
   - Double - (D)
   - Triple - (T)
   - Quad - (Q)
   - Choker - (C)
4. Master Link - Oblong (O)
   or Specials -
   - Endless - (E)
   - Adjustable - (A)
   - Basket - (B)
5. Bottom Attachments -
   - Sling Hook With Latch - (SL)
   - Grab Hook - (G)
   - Foundry Hook - (F)
   - Latch Hook - (L)
6. Length of Assembly - Feet
   (Bearing point to bearing point)

Grade		Chain Size		Number Of Legs	Master Link	Bottom Attachments		Length
80	-	1/2	-	S	O	G	-	10



Alloy Chain Slings

PRODUCT FEATURES

Grade 80

- Proven reliability
- Available in welded or mechanically assembled slings.
- Widest range of sizes and styles
- Greater temperature tolerance.

Grade 100

- Higher capacity per chain size.
- Extreme abrasion resistance.
- Shot blasted & oil finished for corrosion resistance & uniformed appearance.

Rated Capacity For Alloy Chain Slings

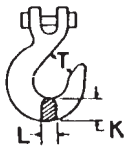
Size Of Chain		90°	60°	45°	30°	60°	45°	30°	Dimensions (in.)		Approx No. of Links per ft.	Nominal Approx. Weights per 100 ft. (lbs.)
(in.)	(mm)	Single Chain @ 90° (lbs.)	Double Chain Slings (lbs.)			Triple & Quad Chain Slings (lbs.)			Inside Length	inside Width		
Grade 80												
7/32	5.5	2,100	3,600	3,000	2,100	5,450	4,450	3,150	.671	.296	17.9	45
9/32	7.0	3,500	6,100	4,900	3,500	9,100	7,400	5,200	.868	.395	13.8	74
3/8	10.0	7,100	12,300	10,000	7,100	18,400	15,100	10,600	1.222	.572	9.8	146
1/2	13.0	12,000	20,800	17,000	12,000	31,200	25,500	18,000	1.404	.720	8.5	258
5/8	16.0	18,100	31,300	25,600	18,100	47,000	38,400	27,100	1.733	.845	6.9	387
3/4	20.0	28,300	49.000	40,000	28,300	73,500	60,000	42,400	2.160	1.052	5.5	622
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
1	26.0	47,700	82,600	67,400	47,700	123,900	101,200	71,500	2.664	1.248	4.5	995
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
Grade 100												
7/32	5.5	2,700	4,700	3,800	2,700	7,000	5,700	4,000	.670	.284	17.9	45
9/32	7.0	4,300	7,400	6,100	4,300	11,200	9,100	6,400	.868	.380	13.8	73
3/8	10.0	8,800	15,200	12,400	8,800	22,900	18,700	13,200	1.181	.512	9.8	148
1/2	13.0	15,000	26,000	21,200	15,000	39,000	31,800	22,500	1.535	.688	8.5	255
5/8	16.0	22,600	39,100	32,000	22,600	58,700	47,900	33,900	1.890	.819	6.9	383
3/4	20.0	35,300	61.100	49,900	35,300	91,700	47,900	53,000	2.362	1.024	5.5	625

Hardware Shapes - Dimensions

oblong link

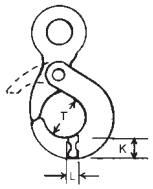
foundry hook

sling hook



grab hook

latch hook



Standard configurations shown in charts, other configurations available, please consult factory.

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°. See load angle chart on page 4.

Alloy Chain Slings - Grade 80

Single Chain Slings


SOSL


SOG


CO


SOF


SASL

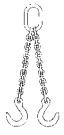

SOL

Chain Size (in.)	Rated Cap. Vertical (lbs.)	Approx. Wt. 5 Foot Reach Type SOS (lbs.)	OBLONG LINK			FOUNDRY HOOK			SLING HOOK WITH LATCH			LOCKING LATCH EYE HOOK		
						Throat	Width	Depth	Throat	Width	Depth	Throat	Width	Depth
			A	B	C	T	L	K	T	L	K	T	L	K
9/32	3,500	5	1/2	2-1/2	5	2.50	1.00	1.23	1.06	.73	1.05	1.38	.81	1.00
3/8	7,100	10	3/4	3	6	3.00	1.27	1.50	1.31	.95	1.28	1.75	.63	1.14
1/2	12,000	18	1	4	8	3.50	1.50	1.75	1.56	1.17	1.66	2.25	1.38	1.38
5/8	18,100	27	1	4	8	4.00	1.81	2.03	1.75	1.44	2.19	2.44	1.75	1.75
3/4	28,300	44	1-1/4	4-3/8	8-3/4	4.50	2.20	2.56	2.19	1.69	2.51	2.44	1.75	1.75
7/8	34,200	58	1-1/2	5-1/4	10-1/2	5.00	2.25	2.78	2.38	1.94	2.84	-	-	-
1	47,700	79	1-3/4	6	12	5.50	2.59	3.03	2.78	2.14	3.09	-	-	-
1-1/4	72,300	121	2	7	14	6.00	3.17	3.81	3.41	2.62	3.89	-	-	-

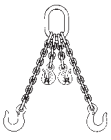
Double Chain Slings


DOG


DOSL


DOF


SE


DASL


SA


DOL

Chain Size (in.)	Rated Cap. @ 60° (lbs.)	Approx. Wt. 5 Foot Reach Type DOS (lbs.)	OBLONG LINK AT TOP			FOUNDRY HOOK			SLING HOOK WITH LATCH			LOCKING LATCH EYE HOOK		
						Throat	Width	Depth	Throat	Width	Depth	Throat	Width	Depth
			A	B	C	T	L	K	T	L	K	T	L	K
9/32	6,100	10	1/2	2-1/2	5	2.50	1.00	1.23	1.06	.73	1.05	1.38	.81	1.00
3/8	12,300	17	3/4	3	6	3.00	1.27	1.50	1.31	.95	1.28	1.75	.63	1.14
1/2	20,800	32	1	4	8	3.50	1.50	1.75	1.56	1.17	1.66	2.25	1.38	1.38
5/8	31,300	51	1-1/4	4-3/8	8-3/4	4.00	1.81	2.03	1.75	1.44	2.19	2.44	1.75	1.75
3/4	49,000	74	1-1/2	5-1/4	10-1/2	4.50	2.20	2.56	2.19	1.69	2.51	2.44	1.75	1.75
7/8	59,200	99	1-3/4	6	12	5.00	2.25	2.78	2.38	1.94	2.84	-	-	-
1	82,600	134	2	7	14	5.50	2.59	3.03	2.78	2.14	3.09	-	-	-
1-1/4	125,200	211	2-1/4	8	16	6.00	3.17	3.81	3.41	2.62	3.89	-	-	-

Triple and Quadruple Chain Slings


DB


TOSL


TOF


TOG


QOSL


QOF


QOG


DA

Chain Size (in.)	Rated Cap. @ 60° (lbs.)	Approx. Wt. 5 Foot Reach Type TOS (lbs.)	Approx. Wt. 5 Foot Reach QSOS (lbs.)	OBLONG LINK			FOUNDRY HOOK			SLING HOOK WITH LATCH		
							Throat	Width	Depth	Throat	Width	Depth
				A	B	C	T	L	K	T	L	K
9/32	9,100	16	19	3/4	2-3/4	5-1/2	2.50	1.00	1.23	1.06	.73	1.05
3/8	18,400	28	35	1	4	8	3.00	1.27	1.50	1.31	.95	1.28
1/2	31,200	53	63	1-1/4	4-3/8	8-3/4	3.50	1.50	1.75	1.56	1.17	1.66
5/8	47,000	81	100	1-1/2	5-1/4	10-1/2	4.00	1.81	2.03	1.75	1.44	2.19
3/4	73,500	116	140	1-3/4	6	12	4.50	2.20	2.56	2.19	1.69	2.51
7/8	88,900	154	187	2	7	14	5.00	2.25	2.78	2.38	1.94	3.84
1	123,900	209	250	2-1/4	8	16	5.50	2.59	3.03	2.78	2.14	3.09
1-1/4	187,800	358	406	2-3/4	9	16	6.00	3.17	3.81	3.41	2.62	3.89

Other configurations available, consult factory.

Alloy Chain Slings - Grade 100

Single Chain Slings


SOSL


SOG


CO


SOF


SASL

Chain Size (in.)	Rated Cap. Vertical (lbs.)	Approx. Wt. 5 Foot Reach Type SOS (lbs.)	OBLONG LINK			FOUNDRY HOOK			SLING HOOK WITH LATCH		
						Throat	Width	Depth	Throat	Width	Depth
			A	B	C	T	L	K	T	L	K
9/32	4,300	5	1/2	2-1/2	5	2.50	1.00	1.23	1.06	.73	1.05
3/8	8,800	10	3/4	3	6	3.00	1.27	1.50	1.31	.95	1.28
1/2	15,000	18	1	4	8	3.50	1.50	1.75	1.56	1.17	1.66
5/8	22,600	27	1	4	8	4.00	1.81	2.03	1.75	1.44	2.19
3/4	35,300	44	1-1/4	4-3/8	8-3/4	4.50	2.20	2.56	2.19	1.69	2.51

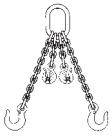
Double Chain Slings


DOG


DOSL


DOF


SE


DASL


SA

Chain Size (in.)	Rated Cap. @ 60° (lbs.)	Approx. Wt. 5 Foot Reach Type DOS (lbs.)	OBLONG LINK AT TOP			FOUNDRY HOOK			SLING HOOK WITH LATCH		
						Throat	Width	Depth	Throat	Width	Depth
			A	B	C	T	L	K	T	L	K
9/32	7,400	10	1/2	2-1/2	5	2.50	1.00	1.23	1.06	.73	1.05
3/8	15,200	17	3/4	3	6	3.00	1.27	1.50	1.31	.95	1.28
1/2	26,000	32	1	4	8	3.50	1.50	1.75	1.56	1.17	1.66
5/8	39,100	51	1-1/4	4-3/8	8-3/4	4.00	1.81	2.03	1.75	1.44	2.19
3/4	61,000	74	1-1/2	5-1/4	10-1/2	4.50	2.20	2.56	2.19	1.69	2.51

Triple and Quadruple Chain Slings

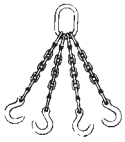

DB


TOSL


TOF


TOG


QOSL


QOF


QOG


DA

Chain Size (in.)	Rated Cap. @ 60° (lbs.)	Approx. Wt. 5 Foot Reach Type TOS (lbs.)	Approx. Wt. 5 Foot Reach QSOS (lbs.)	OBLONG LINK			FOUNDRY HOOK			SLING HOOK WITH LATCH		
							Throat	Width	Depth	Throat	Width	Depth
				A	B	C	T	L	K	T	L	K
9/32	11,200	16	19	3/4	2-3/4	5-1/2	2.50	1.00	1.23	1.06	.73	1.05
3/8	22,900	28	36	1	4	8	3.00	1.27	1.50	1.31	.95	1.28
1/2	39,000	53	63	1-1/4	4-3/8	8-3/4	3.50	1.50	1.75	1.56	1.17	1.66
5/8	58,700	81	100	1-1/2	5-1/4	10-1/2	4.00	1.81	2.03	1.75	1.44	2.19
3/4	91,700	116	140	1-3/4	6	12	4.50	2.20	2.56	2.19	1.69	2.51

Other configurations available, consult factory.

Care And Use Of Alloy Chain Slings

CARE

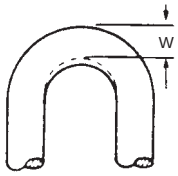
- Store on a rack in a clean, dry place.
- Oil prior to prolong use.
- Do not anneal (temper) alloy chain, connecting links or hook(s). Hot galvanizing requires chain manufacturers advice.

USE

- Check weight of load.
- Check sling rated load for type of lift, angle of loading (see load angle chart).
- Avoid twists, knots or kinks.
- Center load on base (bowl) of hook unless hook is designed for point loading.
- Balance load.
- Avoid jerking load.
- Be alert for snagging of load.
- Maintain load control.
- Pad sharp corners.
- Keep load off sling.
- Avoid dragging sling over rough surfaces and from under the load.
- Stand clear of the load at all times.
- No person allowed beneath the load.
- Persons are not to ride on sling or load.
- When shortening chain, use only the manufacturer's recommended alloy components.
- For use in temperatures over 400° see chart for capacity reduction.

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.



WEAR ALLOWANCE TABLE

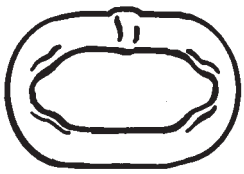
Chain Size (in.)	Minimum Allowable Thickness – W (in.)
9/32 (.281)	.239
3/8 (.375)	.335
1/2 (.500)	.435
5/8 (.625)	.536
3/4 (.750)	.669
7/8 (.875)	.744
1 (1.00)	.870
1-1/4 (1.25)	1.091

Temperature of Chain (°F)	Reduction of Working Temperature		Permanent Reduction of Working Load Limit After Exposure to Temperature	
	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 FROM SERVICE			

Examples Of Chain Sling Abuse/Ware Remove Sling From Service...

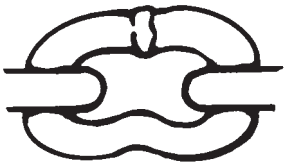
Worn Links

Excessive wear, especially at the bearing points, seriously weakens the chain.



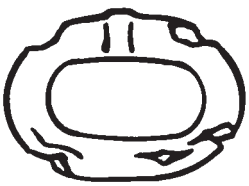
Bent Links

Usually caused by bending over sharp edges of a load.



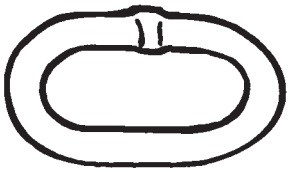
Gouged Links

Damaged by a heavy object being dragged over or dropped on the chain.



Stretched Links

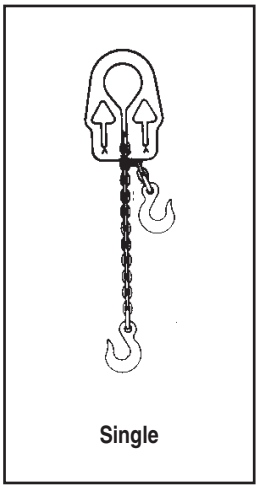
Indicates the chain has been extremely overloaded or subjected to shock loading. These links would not hinge freely with adjacent links.

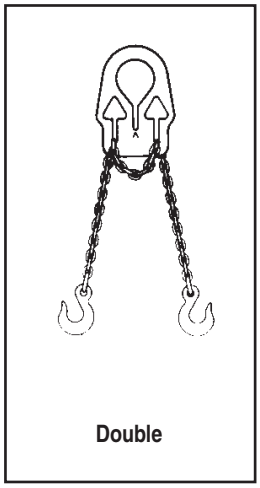


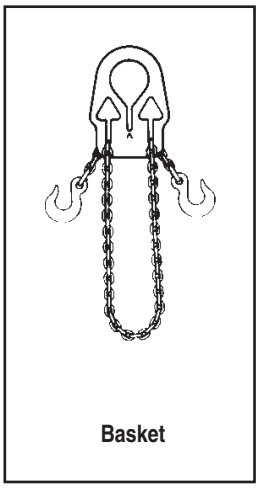
Adjust-A-Link

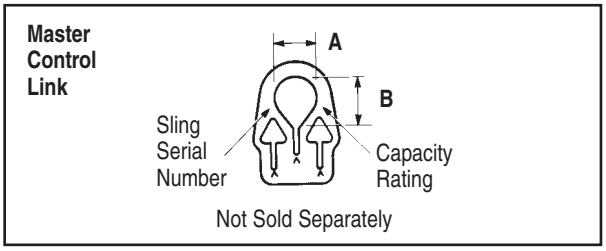
PRODUCT FEATURES:

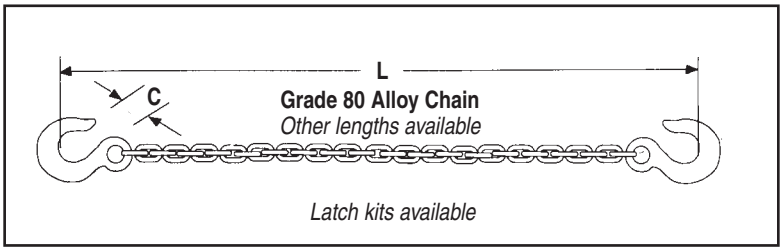
- Versatile assembly does many jobs
- Easily adjustable to accommodate a wide range of applications
- Heat-treated alloy steel construction
- Orange powder coating of master plate helps prevent rust
- Plate is permanently stamped with capacity and serial number











Model No.	Rated Cap. (lbs) single @ 90°	Rated Cap. (lbs) double @ 60°	Chain Size	Dimensions A	Dimensions B	Dimensions C	Dimensions L	Weight (lbs.)
CAAL-7/32-6	2100	3600	7/32	2	2	15/16	6	4.5
CAAL-7/32-10							10	6.5
CAAL-9/32-6	3500	6100	9/32	3	3-1/2	1-1/16	6	8
CAAL-9/32-10							10	11
CAAL-3/8-10	7100	12300	3/8	3-1/4	3-1/4	1-9/16	10	19
CAAL-3/8-14							14	25
CAAL-1/2-10	12000	20800	1/2	4-3/8	4-3/8	2	10	42
CAAL-1/2-14							14	52

Never substitute another chain or exceed the rated capacity. The load bearing chain must be seated at the base of adjusting slot of the Master Control Link. The alloy chain and master Control Link shall not be used separately for general purpose lifting.

WARNING: We recommend that *Adjust-A-Link* assemblies not be used at angles less than 45° from horizontal.