## LiftAlloy Chain Slings



## 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

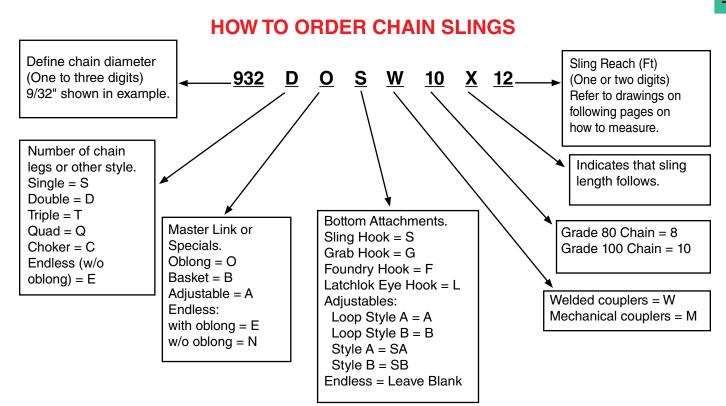
#### **Use of Chain Under Heat Conditions**

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<br>it While at<br>erature | Permanent Reduction<br>of Working Load Limit<br>After Exposure to<br>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 FROM SERVICE                  |  |           |  |  |  |

Consult Lift-All about galvanized chain

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



## 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

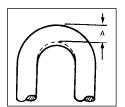
### All LiftAlloy Slings

- 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<br>(in.) | Minimum Allowable<br>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

| o     | Size<br>of Chain |      | 90°                          | 60°     | 45°                   | 30°    | 60°        | 45°                     | 30°      | Nominal<br>Dimensions<br>(in.) |                 | Dimensions Approx |                                 |
|-------|------------------|------|------------------------------|---------|-----------------------|--------|------------|-------------------------|----------|--------------------------------|-----------------|-------------------|---------------------------------|
| Grade | (in.)            | (mm) | Single Chain<br>@ 90° (lbs.) | Double  | e Chain Sli<br>(lbs.) | ings * | Triple & 0 | Quad Chair<br>(lbs.) ** | Slings * | Inside<br>Length               | Inside<br>Width | Links<br>per ft.  | Weight<br>per 100<br>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                           |



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.

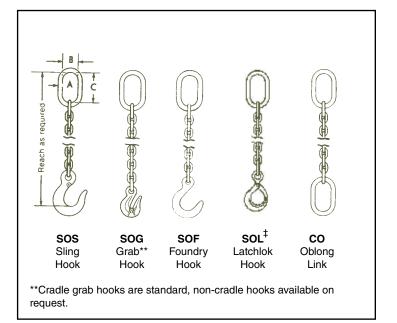
A quad branch chain sling, especially when used on a load of rigid structure, is usually not sustaining the load evenly distributed on each of its four branches. The maximum working load limits are therefore set at the same values as for triple branch chain slings of equal quality and size and used with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



## **LiftAlloy SINGLE CHAIN SLINGS**

| Grade | Chain<br>Size<br>(in.) | <sup>1</sup> Rated Capacity*<br>Vertical<br>(lbs.) | Approx. Weight<br>5 foot Reach<br>Type SOS<br>(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  |

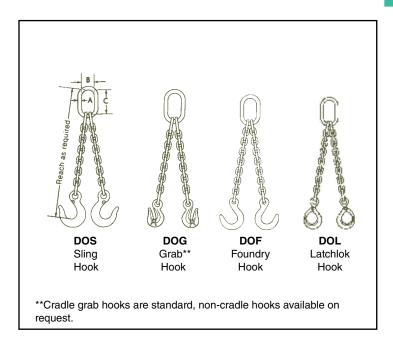
Note: 1. Also referred to as "Working Load Limit".



## **LiftAlloy DOUBLE CHAIN SLINGS**

| Grade | Chain<br>Size<br>(in.) | ¹Rated Capacity*<br>@ 60°<br>(lbs.) | Approx. Weight<br>5 foot Reach<br>Type DOS<br>(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".





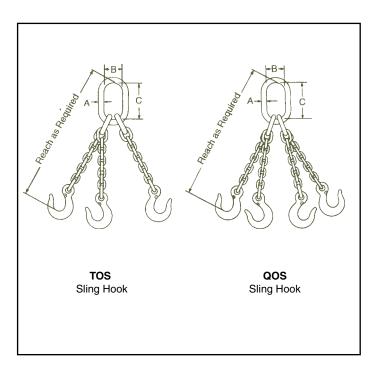
Do not exceed rated capacities. Sling capacity decreases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to chain chart page 99 and Effect of Angle chart page 12.



## **LiftAlloy TRIPLE AND QUAD CHAIN SLINGS**

| Grade | Chain<br>Size<br>(in.) | ¹Rated<br>Capacity*<br>@ 60°<br>(lbs.) | Approx.<br>Weight<br>5 foot Reach<br>Type TOS<br>(lbs.) | Approx.<br>Weight<br>5 foot<br>Reach<br>Type QOS<br>(lbs.) |  |
|-------|------------------------|--|---|--|--|
| 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  |  |

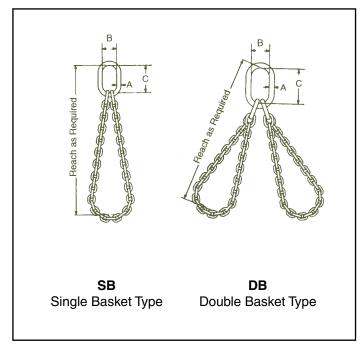
Note: 1. Also referred to as "Working Load Limit".



## **LiftAlloy BASKET TYPE CHAIN SLINGS**

|       | Chain      | ¹Rated Capacity*<br>@ 60°<br>(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                              | 39,000  |  |  |  |
| 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  $30^\circ$ .

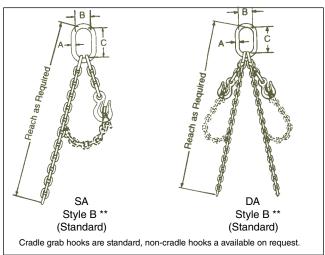
Refer to chain chart page 106 and Effect of Angle chart page 12.



## LiftAlloy ADJUSTABLE CHAIN SLINGS (Traditional Styles)

## LiftAlloy Adjustable Loop Chain Slings

|       | Chain         | ¹Rated Capa<br>(lbs |         |
|-------|---------------|---------------------|---------|
| Grade | Size<br>(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 |



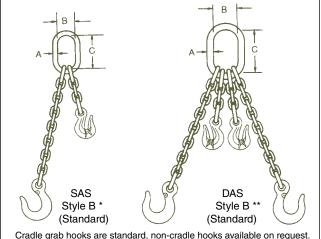
Slings shown here are the most popular of the traditional adjustable type slings.

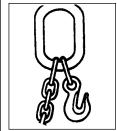
However, Lift-All's engineering staff can design whatever configuration is required to fit individual needs.

\*\* 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         |             | Capacity*<br>es.) |
|-------|---------------|-------------|-------------------|
| Grade | Size<br>(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           |





Style A \*\*

## **LiftAlloy ENDLESS BASKET CHAIN SLINGS**

|       | Chain         | <sup>1</sup> Rated Capacity*<br>(lbs.) |              |  |  |
|-------|---------------|--|--------------|--|--|
| Grade | Size<br>(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".

\* WARNING

Do not exceed rate. Slings should not.

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** 



## **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**

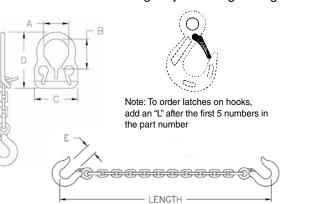
- Chain cannot be removed from the master control plate, assuring the capacity rating will not be compromised
- Alloy steel master control link for strength and reliability
- Each assembly serialized for traceability
- Complies with OSHA proof tested and certified

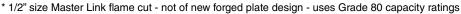
#### Saves Money

- 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

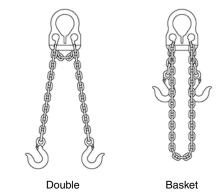
#### Saves Time

- 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









|                        | <sup>1</sup> Rated Capacity * Dimensions (lbs.) (in.) |                 |                   |                    |                       | 6 ft. Length 10 ft. Length |                      | ngth     | 14 ft. Length |          |        |          |        |
|------------------------|---|-----------------|-------------------|--------------------|-----------------------|----------------------------|----------------------|----------|---------------|----------|--------|----------|--------|
| Chain<br>Size<br>(in.) | Single<br>@ 90°                                       | Double<br>@ 60° | Eye<br>Width<br>A | Eye<br>Height<br>B | Overall<br>Width<br>C | Overall<br>Length<br>D     | Hook<br>Opening<br>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     |



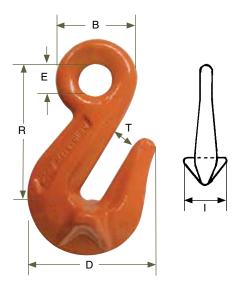
# LiftAlloy Chain Slings

# LIFTAI PRODUCTS FOR RETTER LIETING

## HOOKS, MASTER LINKS, ETC.

## Cradle Grab Eye Hook / Code G

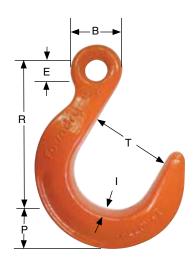
|       | Chain         | Rated               | Dimensions<br>(in.) |      |      |      |      |      | Weight         |
|-------|---------------|---------------------|---------------------|------|------|------|------|------|----------------|
| Grade | Size<br>(in.) | Capacity*<br>(lbs.) | В                   | D    | E    | ı    | R    | Т    | Each<br>(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             |



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

## Foundry Hook / Code F

|       | Chain         |                             |      | Dimensions (in.) |      |      |       |      |                |  |
|-------|---------------|-----------------------------|------|------------------|------|------|-------|------|----------------|--|
| Grade | Size<br>(in.) | Rated Ca-<br>pacity* (lbs.) | В    | E                | I    | Р    | R     | Т    | Each<br>(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             |  |





<sup>\*\*</sup> NOT cradle type



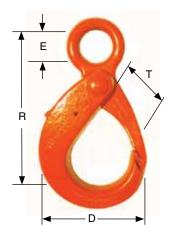
## HOOKS, MASTER LINKS, ETC.

## Latchlok Eye Hooks / Code L

### Grade 100

| Chain         | Rated               |      | Weight |       |      |                |
|---------------|---------------------|------|--------|-------|------|----------------|
| Size<br>(in.) | Capacity*<br>(lbs.) | D    | E      | R     | Т    | Each<br>(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             |

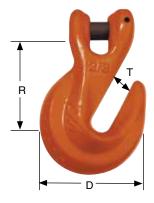
Design factor @ 4:1



### Clevis Cradle Grab Hook / Code G

### Grade 100

| Chain         | Rated               | D    | Weight |      |                |
|---------------|---------------------|------|--------|------|----------------|
| Size<br>(in.) | Capacity*<br>(lbs.) | D    | R      | Т    | Each<br>(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           | 22,000              | 4.50 | 3.75   | 0.77 | 4.2            |
| 3/4           | 35,300              | 5.40 | 5.30   | 0.91 | 10.5           |

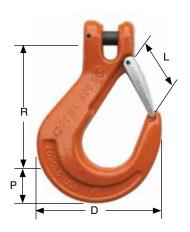


## Clevis Sling Hook with Optional Latch / Code S

### Grade 100

| Chain         | Rated               |      | Weight |      |      |                |
|---------------|---------------------|------|--------|------|------|----------------|
| Size<br>(in.) | Capacity*<br>(lbs.) | D    | L      | Р    | R    | Each<br>(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             |

Note: Latches are not included on Domestic hooks unless specified at time of order.

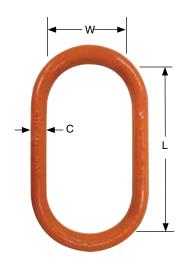




## HOOKS, MASTER LINKS, ETC.

## **Oblong Master Link / Code O**

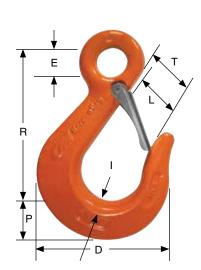
|                           | Link Size *<br>(in.) |                       | Ту         | pe & Size o | of Chain Sli | ng    |                          |
|---------------------------|----------------------|-----------------------|------------|-------------|--------------|-------|--------------------------|
| Diameter<br>Material<br>C | Inside<br>Width<br>W | Inside<br>Length<br>L | Single     | Double      | Triple       | Quad  | Weight<br>Each<br>(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               |       |      | Din  | nension | s (in.) |       |      | Weight         |
|-------|---------------|---------------------|-------|------|------|---------|---------|-------|------|----------------|
| Grade | Size<br>(in.) | Capacity*<br>(lbs.) | D     | E    | ı    | L       | Р       | R     | Т    | Each<br>(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             |

Note: When ordering, specify latch if desired. Latches are not included on Domestic hooks unless specified at time of order.



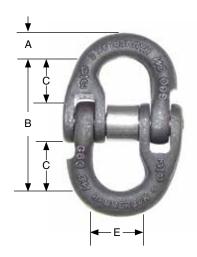
<sup>\*</sup> If sub-assemblies are used, inside dimensions may be reduced. Contact Lift-All if critical.



## HOOKS, MASTER LINKS, ETC.

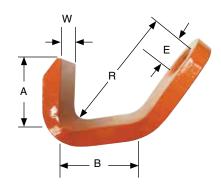
### **Mechanical Coupling Links**

|       | Chain         | Rated               |      | Weight |      |      |                |
|-------|---------------|---------------------|------|--------|------|------|----------------|
| Grade | Size<br>(in.) | Capacity*<br>(lbs.) | Α    | В      | С    | Е    | Each<br>(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**

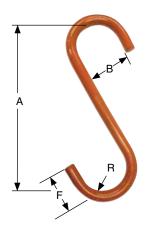
| Chain<br>Size | Rated<br>Capacity* |      | Weight<br>Each |      |       |      |        |
|---------------|--------------------|------|----------------|------|-------|------|--------|
| (in.)         | (lbs.)             | Α    | В              | E    | R     | W    | (lbs.) |
| 9/32          | 4,200              | 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               |        | Weight |       |       |                |
|---------------------|---------------------|--------|--------|-------|-------|----------------|
| Stock Dia.<br>(in.) | Capacity*<br>(lbs.) | Α      | В      | F     | R     | Each<br>(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             |

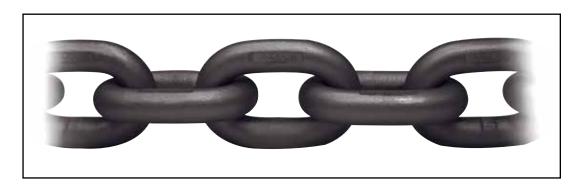


See page 144 for J-Hooks and Custom Engineered Lifting Devices.





## **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<br>Size<br>(in.) | Rated<br>Capacity*<br>(lbs.) | Weight<br>Per<br>CFT.<br>(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 30                     |                              |                              | le 43                        | Grade 70                     |                              |  |
|------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--|
| Chain<br>Size<br>(in.) | Rated<br>Capacity*<br>(lbs.) | Weight<br>Per CFT.<br>(lbs.) | Rated<br>Capacity*<br>(lbs.) | Weight<br>Per CFT.<br>(lbs.) | Rated<br>Capacity*<br>(lbs.) | Weight<br>Per CFT.<br>(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.



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 102 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.

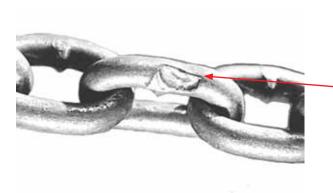
TO PREVENT: Bent links are usually the result of the chain going around the sharp edge of a load during a lift. Load edges must be padded to protect both chain and load.

THE DAMAGE: Weld Spatter

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.

## LiftAlloy Chain Slings

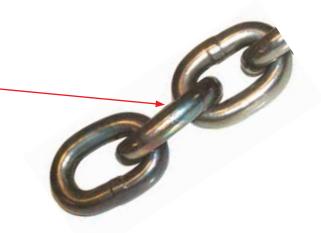


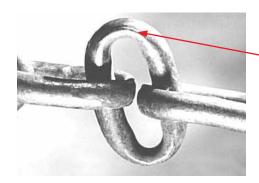
## **INSPECTION CRITERIA FOR CHAIN**

THE DAMAGE: Heat

WHAT TO LOOK FOR: Discolored areas of chain

TO PREVENT: High temperatures begin to affect alloy chain strength at 400°F. When using chain slings at elevated temperatures, refer to the Lift-All temperature chart for chain slings for working load reductions.





#### 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.



