# **inc.** EARS of **Secure Solutions** CHAIN **SLINGS**

Sling Protection

Web Slings

Round Slings

Synthetic Chain Slings

Chain Slings

> Shackles & Turnbuckles

Hooks & Links \_\_\_\_

Lifting Points

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**Chain** Slings This bulletin contains important safety information about the use of Alloy Chain slings, however; it **DOES NOT** contain all the information you need to know about handling, lifting and manipulating materials and loads safely. Sling use is one part of the lifting system and it is your responsibility to consider all risk factors prior to using and rigging device or product. Failure to do this may result in severe **INJURY** or **DEATH** due to sling failure and/or loss of load

### Instructions Regarding Components & Fittings

Components, such as master links and hooks, should have at least the same working load limit (rated capacity) as the chain with which they are used. If not, the sling shall be rated to the capacity of the weakest component. Super Slings offers a full line of Grade 80 and Grade 100 sling components engineered specifically to be compatible with our alloy chain products.

### WARNINGS AND CAUTIONS

- The use of chain, slings, and components are subject to certain hazards that cannot be met by mechanical or manufacturing means, but only by the exercise of intelligence, care, and common sense
- Sling use is subject to the Alberta Occupational Health & Safety Part 21 and American Society for Mechanical Engineers (ASME B30.9) safety standards, requiring the sling user to conduct safe working practices and perform inspections
- Do not exceed the working load limit of the sling or any component
- Chemically active environments may adversely affect chain slings. Do not use in highly acidic or caustic environments. Super Slings should be contacted if the sling will be exposed to chemically active environments during use
- High and low temperatures will affect chain slings. Super Slings should be contacted if temperatures below -40°F (-29°C) will be experienced. The Effect of Elevated Temperature on the Working Load Limit of Alloy Chain chart shows the reduction in strength that occurs when chain slings are used at or have been exposed to temperatures above 400°F (204°C)
- Never field weld or repair a chain sling. Chain slings should only be repaired by a qualified repair facility
- See information under the Care, Inspection, and Proper Use sections

### **CARE**

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- Chain slings should be stored in a clean and dry area, preferably on a rack, in order to extend their life
- Chain slings should not be stored in areas where they would be subject to damage, corrosion, chemical attack, or extreme temperatures
- Clean slings periodically, as dust and grit can accelerate wear
- During use, chain slings should not be dragged over abrasive surfaces. Loads should not be rested on the chain sling to avoid damage

### PROPER USE

To protect the operators, the load, and the sling, the following safe practices should be followed. Super Slings also recommends compliance with the OH&S and ASME safety standard practices.

Select a sling suitable for the load, type of hitch, angle of

loading, and environment. The hooks and master links should be of a size to fit the intended connections  $% \left( {{\left[ {{{\rm{c}}} \right]}_{{\rm{c}}}}_{{\rm{c}}}} \right)$ 

Years of Secure Solutions

- Avoid shock loading
- Pad all sharp edges or corners in contact with the sling to prevent damage to either the sling or the load
- Balance the load to prevent shifting, to maintain control of the load, and to prevent overloading of any leg in a multiple leg sling
- Rig so that the load is properly seated in the hooks and master link. Avoid tip loading of hooks and side loading of master links
- Avoid twisting or kinking of sling legs
- Never knot chain legs
- Horizontal angles less than 30° should not be used
- For choker hitches, angles of choke greater than 120° should not be used without consulting Super Slings or a qualified person. Choker hitches reduce the working load limit by 20%
- For basket hitches, the minimum recommended diameter of the load is 6 times the nominal chain diameter. The attached D/d chart shows the reduction in the WLL for D/d ratios less than 6.

### **INSPECTION**

ASME safety standards require the user to conduct:

a) Frequent Inspections: A visual inspection for damage, which should be performed each day the sling is used.

b) Periodic Inspections: A complete link by link and component inspection. Periodic inspection intervals vary depending on sling usage and conditions, but must occur at least annually. Written records of periodic inspections are required. The slings should be inspected for the presence damage. The sling should immediately be removed from service if any of the following conditions are present:

- Missing or unreadable identification tag
- Cracks in the chain or any component
  - Excessive nicks, gouges or wear. Chain should be removed from service if the thickness at any point on the link is below the value shown in the **Alloy Chain Minimum Allowable Thickness** chart. All other components should be removed from service if any dimension is worn more than 10% from the original.

### Alloy Chain - Minimum Allowable Thickness

| _             |       | Stock |       | Stock |           | owable |  |
|---------------|-------|-------|-------|-------|-----------|--------|--|
|               | 51    | ze    | Di    | a.    | Thickness |        |  |
|               | [in]  | [mm]  | [in]  | [mm]  | [in]      | [mm]   |  |
|               | 9⁄32  | 7     | .282  | 7     | .239      | 6.07   |  |
|               | 3⁄8   | 10    | .402  | 10    | .342      | 8.69   |  |
|               | 1/2   | 13    | .522  | 13    | .443      | 11.26  |  |
|               | 5⁄8   | 16    | .643  | 16    | .546      | 13.87  |  |
|               | 3⁄4   | 20    | .802  | 20    | .687      | 17.45  |  |
| - Million - I | 7⁄8   | 22    | .881  | 22    | .750      | 19.05  |  |
|               | 1     | 26    | 1.000 | 25    | .887      | 22.53  |  |
|               | 1 1/4 | 32    | 1.250 | 32    | 1.091     | 27.71  |  |

# super slings

# Lift it up, Tie it down, Pull it around

# Chain Sling Inspection

procedure to ensure complete examination:

**1.** Clean each chain sling prior to inspection. Chain that is coated with paint, dirt or oil may hide nicks, gouges or other damage.

**2.** Check the identification tag legibility. Ensure that its serial number, name of manufacturer, size, grade, working load limit and reach correspond to the original Chain Sling Certification when the sling was manufactured.

**3.** Measure the reach of sling legs to make sure they correspond to the values stamped on the chain sling identification tag. If one or more legs are longer, there is a possibility that the sling has been subjected to overloading or excessive wear.

4. Any chain sling removed from service should be tagged and returned to the central issuing department with data covering the detected during the inspection. The sling can then be returned to a Super Slings Service Centre for the appropriate repairs and proof testing.

**The inspection should follow a formal written inspection 5.** If hooks have been opened more than 5% of the normal throat openings (measured at the narrowest point) or twisted more than O degrees from the plane of unbent hook, the sling shall be removed from service.

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Accessories

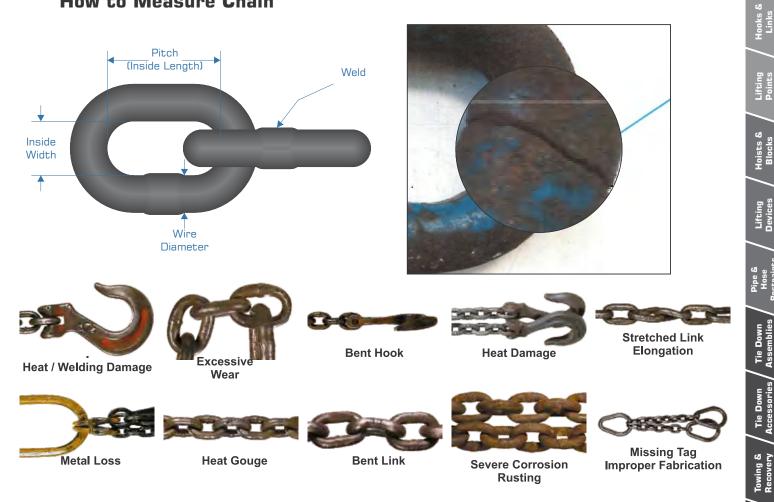
Rope & Cordage

6. Attach "Danger - Do Not Use" warning tag to each sling removed from service. Record the removal of the sling on sling inspection report form.

7. Inspect the master and coupling links for wear or damage.

8. Make a link-by-link inspection of the chain slings for:

- Excessive wear. If the wear on any portion of any link exceeds the allowable wear shown on this table remove from service.
- Twisted, bent or cut links.
- Cracks in the weld area or any portion of the link. .
- Nicks or gouges. ٠
- Stretched links. .
- Severe corrosion.
- Any deformation or degradation of components.



# How to Measure Chain

866-787-7544

# Effect of Elevated Temperature on the Working Load Limit of Alloy Chain

| WARNING: ALLOY STEEL CHAINS SLINGS  | Temper | aturo | Grade of Chain   |   |   |   |  |
|---|--------|-------|--|---|---|---|--|
| MAY BE AFFECTED BY TEMPERATURES<br>ABOVE 400°F (204°C)  | Temper | acure | GRAI   | DE 80   | GRADE 100   |   |  |
| Alloy steel chain sling WLL shall be reduced in accordance with the adjacent tables when heated between 400°F (204°C) and 1000°F (537°C). |        | (C°)  | Reduction of<br>Working<br>Load Limit<br>WHILE AT<br>Temperature | Reduction of<br>Working Load<br>Limit AFTER<br>EXPOSURE to<br>Temperature | Reduction of<br>Working Load<br>Limit WHILE AT<br>Temperature | Reduction of<br>Working Load<br>Limit AFTER<br>EXPOSURE to<br>Temperature |  |
|   | <400°  | <204° | None   | None  | None  | None  |  |
|   | 400°   | 204°  | 10%  | None  | 15%   | None  |  |
| Permanent WLL reduction shall be made in  | 000    | 260°  | 15%  | None  | 25%   | 5%  |  |
| accordance with the adjacent tables for<br>chain slings heated over temperatures  | 600    | 316°  | 20%  | 5%  | 30%   | 15%   |  |
| indicated. Identification tag shall be replaced   | 7000   | 371°  | 30%  | 10%   | 40%   | 20%   |  |
| and the new tag shall have the reduced WLL.   | 800°   | 427°  | 40%  | 15%   | 50%   | 25%   |  |
|   | 900°   | 482°  | 50%  | 20%   | 60%   | 30%   |  |
| For temperatures below -40°C(-40°F) please<br>contact your Super Slings representative.   | 1000°  | 538°  | 60%  | 25%   | 70%   | 35%   |  |
|   | >1000° | >538° |  |   | k perienced temp  |   |  |

)° >538° access of 1000° F (538°C) must be removed from service.

### **Alloy Chain Specifications**

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Alloy steel chain is electrically welded alloy steel embodying the latest manufacturing technology. Alloy provides a superior chain sling with high tensile strength and excellent wear resistance. The following chains meet or exceed all existing OH&S, ANSI, ASME, NACM and ASTM specification requirements. The Alloy chain and attachments used in fabricating Super Slings chain slings offer a design factor of 4 to 1.

|       |        |       |      | Nomina | l Dimen | <mark>sions (i</mark> | n & mm  | )    | 14/    | leinen        | ng East/      |               | Links         |
|-------|--------|-------|------|--------|---------|-----------------------|---------|------|--------|---------------|---------------|---------------|---------------|
| Trade | e Size | Grade | Mat  | erial  | In      | <mark>iside Di</mark> | mensior | າຣ   |        | king<br>Limit | Feet/<br>Drum | Lbs.<br>/foot | Links<br>/ft. |
|       |        |       | Diam | leter  | Len     | gth                   | Width   |      |        |               | Brain         | /1000         | /10.          |
| [in]  | [mm]   |       | [in] | [mm]   | [in]    | [mm]                  | [in]    | [mm] | Lbs    | kgs           |               |               |               |
| 9/32  | 7      | 100   | .29  | 7      | .86     | 22                    | .41     | 10   | 4,300  | 1,950         | 500           | 74            | 13.8          |
| 5⁄16  | 8      | 80    | .32  | 8      | .94     | 24                    | .46     | 12   | 4,500  | 2,000         | 500           | 92            | 12.8          |
| 5⁄16  | 8      | 100   | .33  | 8      | 1.01    | 26                    | .50     | 13   | 5,700  | 2,600         | 500           | 104           | 12            |
| 3⁄8   | 10     | 100   | .40  | 10     | 1.22    | 31                    | .57     | 14   | 8,800  | 3,990         | 500           | 148           | 10.0          |
| 1/2   | 13     | 100   | .52  | 13     | 1.57    | 40                    | .75     | 19   | 15,000 | 6800          | 300           | 250           | 7.8           |
| 5⁄8   | 16     | 100   | .64  | 16     | 1.93    | 49                    | .87     | 22   | 22,600 | 10,250        | 200           | 379           | 6.5           |
| 3⁄4   | 20     | 100   | .80  | 20     | 2.42    | 61                    | 1.09    | 28   | 35,300 | 16,000        | 100           | 610           | 4.9           |
| 7⁄8   | 22     | 100   | .88  | 22     | 2.70    | 69                    | 1.28    | 31   | 42,700 | 19,400        | 100           | 775           | 4.4           |
| 1     | 26     | 80    | 1.00 | 25     | 2.80    | 71                    | 1.40    | 36   | 47,700 | 21,600        | 100           | 965           | 4.3           |
| 11⁄4  | 32     | 80    | 1.25 | 32     | 3.50    | 89                    | 1.75    | 44   | 72,300 | 32,800        | 60            | 1525          | 3.5           |

**NOTICE:** The product specifications and dimensions are as accurate as possible at the time of printing. However, because we are constantly improving the quality and design of our product, they can change without notice.

**WARNING: PURCHASERS** please note that all "Warnings and Cautions" apply to chain, components and fittings, as well as chain slings. Purchasers are responsible for conveying the "Warnings and Cautions" including the "Inspection, Care and Proper Use" section information to the end user. Super Slings denies any liability for damage that results from use in excess of the working load limit or any abuse or misuse of the product. Any questions concerning the use of Super Slings products may be directed to your Super Slings Sales Representative or Customer Service.





# Every Lift Uses 1 of 3 Basic Hitches



 Vertical, a simple straight attachment connecting a lifting hook or other device to a load. Full rated load of the sling may be used, but never exceeded. A tagline should be used on such a lift to prevent rotation which can damage the sling. A sling with a hand-tucked splice can unlay and fail if the sling is allowed to rotate.
Choker hitches reduce lifting capability of a sling, since this method of rigging affects the ability of the wire rope components to adjust during the lift, places angular loading on the body of the sling, and creates a small diameter bend in the sling body at the choke point.

**3. Basket** hitches distribute a load equally between the two legs of a sling, within limitations imposed by the angles at which legs are rigged to the load.

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### Vertical Hitch

A vertical hitch, or straight hitch, is the most basic hitch used to directly connect a load to a lifting device. On a vertical hitch, the eye of a single chain sling, wire rope sling, or synthetic sling is connected to the crane or hoist hook, while the other eye is connected to an attachment point on the load. The Vertical Hitch will utilize 100% of the lifting capacity of the sling.

### A single vertical hitch should never be used for lifting loose materials, long loads, or unbalanced loads.

**WARNING:** A twisted chain sling can cause uneven loading of individual links, potentially resulting in premature wear of failure. Use of a tagline is recommended to prevent the load from spinning. Always use caution when controlling a load, ensure not persons are in an area where they can be struck by the load or attached rigging.

### Basket Hitch

A basket hitch is formed when both eyes of the sling are placed on the lifting hook, thereby forming a circular basket of the sling. This type of hitch distributes the load equally between the two legs of the sling, within limitations. A basket hitch has twice the capacity of a single leg only if D/d ratio is 6/1 and the sling to load angle is 90°. When the **sling to load angle** are less than 90°, increased tension is applied and must be accounted for.

### Lifting Bridles

When you attach two or more slings to the same lifting hook, or are connected to a link rigged onto the hook, the total hitch becomes a lifting bridle, distributing the load among the individual slings. When using two or more slings as a lift-ing bridle, remember that the sling angle affects the slings' rated capacities. Also, the location of the lift's centre of gravity will affect the load on each sling leg.

# 

90°

# Alloy Chain D/d Capacity Reduction

 $\mathbf{D}/\mathbf{d}$  is the ratio between the curvature taken by the sling (D), and the diameter of the component chain (d).

National Association of Chain Manufacturers (NACM) has conducted D/d testing on alloy chain and concluded the following

1) Effect of D/d is the same for all sizes and grades of alloy steel chain.

2) Strength loss is highly consistent with D/d ratio.

3) No damage to chain at WLL (working load limit) with a D/d as low as 2.

4) Minimum D/d pin diameter of 5 recommended for proof testing basket slings.

5) Strength loss is 10% or less once D/d is 5 or greater.

super slings

The adjacent chart shows reductions in working load limit of an endless alloy sling based on D/d ratio. Consult the manufacturer for any D/d below 2.

Sling (D), and NACM Recommendation for rated load reductions for basket slings to account for D/d ratio

1-84

| D/d         | % of Rated Load |  |  |  |  |  |
|-------------|-----------------|--|--|--|--|--|
| Less than 2 | Not Recommended |  |  |  |  |  |
| 2           | 60              |  |  |  |  |  |
| 3           | 70              |  |  |  |  |  |
| 4           | 80              |  |  |  |  |  |
| 5           | 90              |  |  |  |  |  |
| 6 & Above   | 100             |  |  |  |  |  |
| Suber       | slings.ca       |  |  |  |  |  |

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Round Slings

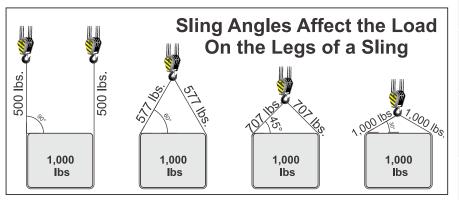
Sling Protection

Web

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# Lift it up, Tie it down, Pull it around SLING TO LOAD ANGLE

**Sling Angles affect the Load on the Legs of a Sling:** SLING ANGLE (also called Angle of Loading) is the angle measured between a horizontal line and the sling leg or body. This angle is very important and can have a dramatic effect on the rated load of a sling. As illustrated here, when this angle DECREASES, the LOAD ON EACH LEG INCREASES. This principle applies whether one sling is used with legs at an angle in a basket hitch, or for multileg bridle slings. Angles less than 30 degrees should not be used.



| r                       |                   | 1                |
|-------------------------|-------------------|------------------|
| Sling T                 | ension            | E                |
| Angle/Deg<br>Horizontal | Tension<br>Factor | (:<br>  n<br>  t |
| 90                      | 1.000             | n                |
| 80                      | 1.015             | •<br> E          |
| 70                      | 1.064             | <u>E</u><br>  A  |
| 60                      | 1.155             | ] r(             |
| 50                      | 1.305             | •                |
| 45                      | 1.414             |                  |
| 35                      | 1.742             | A<br>W           |
| 30                      | 2.000             | C                |

**Effect of Angle** - Sling tensions are affected by angle of lift sling angle), measured from the horizontal, when used with multi-legged chain slings or basket hitches. The effect of this angle may be determined by using either of these two methods:

Sling Tension Method (Recommended Method) Example:

A two-leg sling lifting a 2,000 lbs object at  $30^\circ$  has a tension factor of 2.0. The esultant tension per leg is 2,000 lbs.

### • **Reduced Sling Capacity** Method (Alternative Method) Example:

A two-leg sling with a capacity of 4,000 lbs total at 90° (4,000 lbs per leg) When used at an angle of  $30^{\circ}$  has a reduction factor of 0.5. The resultant capacity is 2,000 lbs total at  $30^{\circ}$ 

| Capacity                | Reduction      |
|-------------------------|----------------|
| Angle/Deg<br>Horizontal | Loss<br>Factor |
| 90                      | 1.000          |
| 80                      | 0.985          |
| 70                      | 0.940          |
| 60                      | 0.866          |
| 50                      | 0.766          |
| 45                      | 0.707          |
| 35                      | 0.574          |
| 30                      | 0.500          |

Sling Protection

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Round Slings

Synthetic Chain Slings

Chain Slings

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Lifting Devices

Tie Down Assemblie:

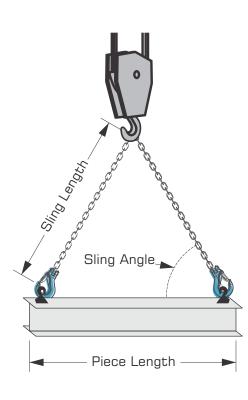
Tie Down Accessories

Towing & Recovery

Rope & Cordage

### Sling-to-Load Angle Quick Reference

| sing to Ioua Anglo Calok Holoronoo |              |             |              |             |              |             |  |  |  |  |
|------------------------------------|--------------|-------------|--------------|-------------|--------------|-------------|--|--|--|--|
| Piece Length                       | 60 De        |             | 45 De        |             |              | 30 Degrees  |  |  |  |  |
| -                                  | Sling Length | Pick Height | Sling Length | Pick Height | Sling Length | Pick Height |  |  |  |  |
| 1                                  | 1            | 0.9         | 0.7          | 0.5         | 0.6          | 0.3         |  |  |  |  |
| 2                                  | 2            | 1.7         | 1.4          | 1.0         | 1.2          | 0.6         |  |  |  |  |
| 3                                  | 3            | 2.6         | 2.1          | 1.5         | 1.7          | 0.9         |  |  |  |  |
| 4                                  | 4            | 3.5         | 2.8          | 2.0         | 2.3          | 1.2         |  |  |  |  |
| 5                                  | 5            | 4.3         | 3.5          | 2.5         | 2.9          | 1.4         |  |  |  |  |
| 6                                  | 6            | 5.2         | 4.2          | 3.0         | 3.5          | 1.7         |  |  |  |  |
| 7                                  | 7            | 6.1         | 4.9          | 3.5         | 4.0          | 2.0         |  |  |  |  |
| 8                                  | 8            | 6.9         | 5.7          | 4.0         | 4.6          | 2.3         |  |  |  |  |
| 9                                  | 9            | 7.8         | 6.4          | 4.5         | 5.2          | 2.6         |  |  |  |  |
| 10                                 | 10           | 8.7         | 7.1          | 5.0         | 5.8          | 2.9         |  |  |  |  |
| 11                                 | 11           | 9.5         | 7.8          | 5.5         | 6.3          | 3.2         |  |  |  |  |
| 12                                 | 12           | 10.4        | 8.5          | 6.0         | 6.9          | 3.5         |  |  |  |  |
| 13                                 | 13           | 11.3        | 9.2          | 6.5         | 7.5          | 3.8         |  |  |  |  |
| 14                                 | 14           | 12.1        | 9.9          | 7.0         | 8.1          | 4.0         |  |  |  |  |
| 15                                 | 15           | 13.0        | 10.6         | 7.5         | 8.7          | 4.3         |  |  |  |  |
| 16                                 | 16           | 13.9        | 11.3         | 8.0         | 9.2          | 4.6         |  |  |  |  |
| 17                                 | 17           | 14.7        | 12.0         | 8.5         | 9.8          | 4.9         |  |  |  |  |
| 18                                 | 18           | 15.6        | 12.7         | 9.0         | 10.4         | 5.2         |  |  |  |  |
| 19                                 | 19           | 16.5        | 13.4         | 9.5         | 11.0         | 5.5         |  |  |  |  |
| 20                                 | 20           | 17.3        | 14.1         | 10.0        | 11.5         | 5.8         |  |  |  |  |
| 21                                 | 21           | 18.2        | 14.8         | 10.5        | 12.1         | 6.1         |  |  |  |  |
| 22                                 | 22           | 19.1        | 15.6         | 11.0        | 12.7         | 6.4         |  |  |  |  |
| 23                                 | 23           | 19.9        | 16.3         | 11.5        | 13.3         | 6.6         |  |  |  |  |
| 24                                 | 24           | 20.8        | 17.0         | 12.0        | 13.8         | 6.9         |  |  |  |  |
| 25                                 | 25           | 21.7        | 17.7         | 12.5        | 14.4         | 7.2         |  |  |  |  |
| 26                                 | 26           | 22.5        | 18.4         | 13.0        | 15.0         | 7.5         |  |  |  |  |
| 27                                 | 27           | 23.4        | 19.1         | 13.5        | 15.6         | 7.8         |  |  |  |  |
| 28                                 | 28           | 24.2        | 19.8         | 14.0        | 16.2         | 8.1         |  |  |  |  |
| 29                                 | 29           | 25.1        | 20.5         | 14.5        | 16.7         | 8.4         |  |  |  |  |
| 30                                 | 30           | 26.0        | 21.2         | 15.0        | 17.3         | 8.7         |  |  |  |  |
| 31                                 | 31           | 26.8        | 21.9         | 15.5        | 17.9         | 9.0         |  |  |  |  |
| 32                                 | 32           | 27.7        | 22.6         | 16.0        | 18.5         | 9,2         |  |  |  |  |
| 33                                 | 33           | 28.6        | 23.3         | 16.5        | 19.0         | 9.5         |  |  |  |  |
| 34                                 | 34           | 29.4        | 24.0         | 17.0        | 19.6         | 9.8         |  |  |  |  |
| 35                                 | 35           | 30.3        | 24.7         | 17.5        | 20.2         | 10.1        |  |  |  |  |
| 36                                 | 36           | 31.2        | 25.5         | 18.0        | 20.8         | 10.4        |  |  |  |  |
| 37                                 | 37           | 32.0        | 26.2         | 18.5        | 21.3         | 10.7        |  |  |  |  |
| 38                                 | 38           | 32.9        | 26.9         | 19.0        | 21.9         | 11.0        |  |  |  |  |
| 39                                 | 39           | 33.8        | 27.6         | 19.5        | 22.5         | 11.3        |  |  |  |  |
| 40                                 | 40           | 34.6        | 28.3         | 20.0        | 23.1         | 11.6        |  |  |  |  |
| 41                                 | 41           | 35.5        | 29.0         | 20.5        | 23.7         | 11.8        |  |  |  |  |
| 42                                 | 42           | 36.4        | 29.7         | 21.0        | 24.2         | 12.1        |  |  |  |  |
| 43                                 | 43           | 37.2        | 30.4         | 21.5        | 24.8         | 12.4        |  |  |  |  |
| 44                                 | 44           | 38.1        | 31.1         | 22.0        | 25.4         | 12.7        |  |  |  |  |
| 45                                 | 45           | 39.0        | 31.8         | 22.5        | 26.0         | 13.0        |  |  |  |  |
| 46                                 | 46           | 39.8        | 32.5         | 23.0        | 26.5         | 13.3        |  |  |  |  |
| 47                                 | 47           | 40.7        | 33.2         | 23.5        | 27.1         | 13.6        |  |  |  |  |
| 48                                 | 48           | 41.6        | 33.9         | 24.0        | 27.7         | 13.9        |  |  |  |  |
| 49                                 | 49           | 42.4        | 34.6         | 24.5        | 28.3         | 14.2        |  |  |  |  |
| 50                                 | 50           | 43.3        | 35.4         | 25.0        | 28.9         | 14.5        |  |  |  |  |
| 00                                 | 55           | 40.0        | 00.4         | 20.0        | 20.0         | 14.0        |  |  |  |  |

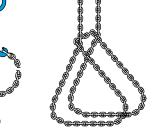


### **Choker Hitches:**

In shortening applications, a 20% reduction of the Working Load Limit is required except when using Cradle Grab Hooks, Cradle Chain Shortener Link, or a Chain Choker Hook in-conjunction Chain Coupler Link. They can be used without any reduction to the Working Load Limit as long as the choke angle is not below 120°.

Whenever a sling is used in a choker hitch and results in a Choker Hitch Angle less than 120 degrees, Choker Working Load Limits must be adjusted. Determine the Choker Hitch Angle and multiply the Choker Hitch Work Load Limit by th appropriate Reduction Factor. The result is the actual, reduced Choker Work Load Limit.





# . 180° 120° 90° 60° 30° 0

**Choker Hitches** 

**O** Years of Secure Solutions

| Angle of Choke | Sling rated capacity factor |
|----------------|-----------------------------|
| (degrees)      | as percentage of single leg |
|                | choker hitch capacity       |
| 120-180        | 100%                        |
| 105-120        | 82%                         |
| 90-105         | 71%                         |
| 60-90          | 58%                         |
| 0-60           | 50%                         |

Cradle Grab Hook



# "Sharp" Edges

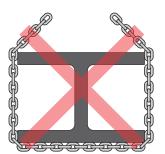
Always use edge protectors to prevent sharp edges from damaging the chain. If lifting over sharp edges reduce the working load with the adjacent reduction table.

- The angle of the edge must not be below  $90^\circ$
- Chain links shall be protected from being bent or deformed and from receiving cuts or gouges.
- Chain sling WLL is to be reduced when chain is rigged over an edge radius R less than two (2) x chain diameter (d).
- Reduced WLL equals chain sling WLL from identification tag x reduction factor.
- Slings shall be padded or protected from the edges of their loads when the edge radius is less than 0.5 of the chain diameter(d). Slings shall be rigged to prevent chain from sliding over a load edge radius while lifting.
- Slings used in basket hitch shall have the loads balanced to prevent slipping.

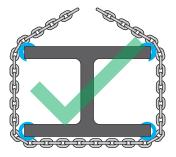
When lifting with chain directly on lugs the lug diameter > 3x the pitch of the chain, otherwise the WLL must be reduced by 50%.

### **Edge Loading and Packing**

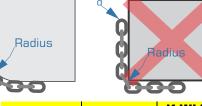
Chain is designed to support a load in a straight line. Never tie knots in the chain and always make sure chain is free from twists before putting it under tension. Where chain has to pass round a sharp corner use suitable packaging to give the chain protection.

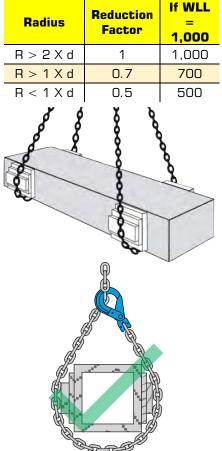


super slings



1-86





superslings.ca

Sling Protection

Web

Round Slings

Synthetic Chain Slings

Chain Slings

Down

Tie Down

# Lift it up, Tie it down, Pull it around =



# Grade 100

Working Load Limits in pounds for chain slings Grade 100 according to NACM Based on A 906/A 906M-2 

|                         |        |        |                  | WORKING          | <mark>; load lii</mark> | MITS [lbs] |           |         |
|-------------------------|--------|--------|------------------|------------------|-------------------------|------------|-----------|---------|
| Grade 100<br>Chain Size |        | Q      | $\bigtriangleup$ | $\bigtriangleup$ |                         |            |           |         |
|                         |        | 1-leg  |                  | 2-Leg            |                         |            | 3 & 4-Leg |         |
| [mm]                    | [in]   | 90°    | 60°              | 45°              | 30°                     | 60°        | 45°       | 30°     |
| 6                       | 7/32"  | 3,300  | 5,500            | 4,625            | 3,300                   | 8,400      | 6,800     | 4,850   |
| 7                       | 9/32"  | 4,300  | 7,400            | 6,100            | 4,300                   | 11,200     | 9,100     | 6,400   |
| 8                       | 5/16"  | 5,700  | 9,900            | 8,100            | 5,700                   | 14,800     | 12,100    | 8,500   |
| 10                      | 3/8"   | 8,800  | 15,200           | 12,400           | 8,800                   | 22,900     | 18,700    | 13,200  |
| 13                      | 1/2"   | 15,000 | 26,000           | 21,200           | 15,000                  | 39,000     | 31,800    | 22,500  |
| 16                      | 5/8"   | 22,600 | 39,100           | 32,000           | 22,600                  | 58,700     | 47,900    | 33,900  |
| 20                      | 3/4"   | 35,300 | 61,100           | 49,900           | 35,300                  | 91,700     | 74,900    | 52,950  |
| 22                      | 7/8"   | 42,700 | 74,000           | 60,400           | 42,700                  | 110,900    | 90,600    | 64,000  |
| 26                      | 1"     | 59,700 | 103,100          | 84,100           | 59,500                  | 155,600    | 126,600   | 89,250  |
| 32                      | 1-1/4" | 88,160 | 152,700          | 124,600          | 88,160                  | 229,000    | 186,950   | 132,200 |

# Grade 80

866-787-7544

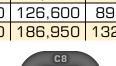
Working Load Limits in pounds for chain slings Grade 80, according to NACM Based on A 906/A 906M-2



|       |        |  |                  | WORKING | ; LOAD LII | MITS [lbs] |         |         |
|-------|--------|--|------------------|---------|------------|------------|---------|---------|
| Grad  | e 80   | 1-leg  |                  | 2-Leg   | 3 & 4-Leg  |            |         |         |
| Chain |        | <b>•</b> ••••••••••••••••••••••••••••••••••• | $\bigtriangleup$ |         |            |            |         |         |
| [mm]  | [in]   | 90°  | 60°              | 45°     | 30°        | 60°        | 45°     | 30°     |
| 6     | 7/32"  | 2,450  | 4,200            | 3,300   | 2,425      | 6,400      | 5,050   | 3,525   |
| 7     | 9/32"  | 3,500  | 6,100            | 4,900   | 3,500      | 9,100      | 7,400   | 5,200   |
| 8     | 5/16"  | 4,500  | 7,800            | 6,400   | 4,500      | 11,700     | 9,500   | 6,800   |
| 10    | 3/8"   | 7,100  | 12,300           | 10,000  | 7,100      | 18,400     | 15,100  | 10,600  |
| 13    | 1/2"   | 12,000                                       | 20,800           | 17,000  | 12,000     | 31,200     | 25,500  | 18,000  |
| 16    | 5/8"   | 18,100                                       | 31,300           | 25,600  | 18,100     | 47,000     | 38,400  | 27,100  |
| 20    | 3/4"   | 28,300                                       | 49,000           | 40,000  | 28,300     | 73,500     | 60,000  | 42,400  |
| 22    | 7/8"   | 34,200                                       | 59,200           | 48,400  | 34,200     | 88,900     | 72,500  | 51,300  |
| 26    | 1"     | 47,700                                       | 82,600           | 67,400  | 47,700     | 123,900    | 101,200 | 71,500  |
| 32    | 1-1/4" | 72,300                                       | 125,200          | 102,200 | 72,300     | 187,800    | 153,400 | 108,400 |

1-87

See Hardware Section for Available attachments and specifications.



C10

# super slings

Round Slings

Synthetic Chain Slings

Vire Ro<sub>l</sub> Slings

Chain Slings

Shackles & Turnbuckles

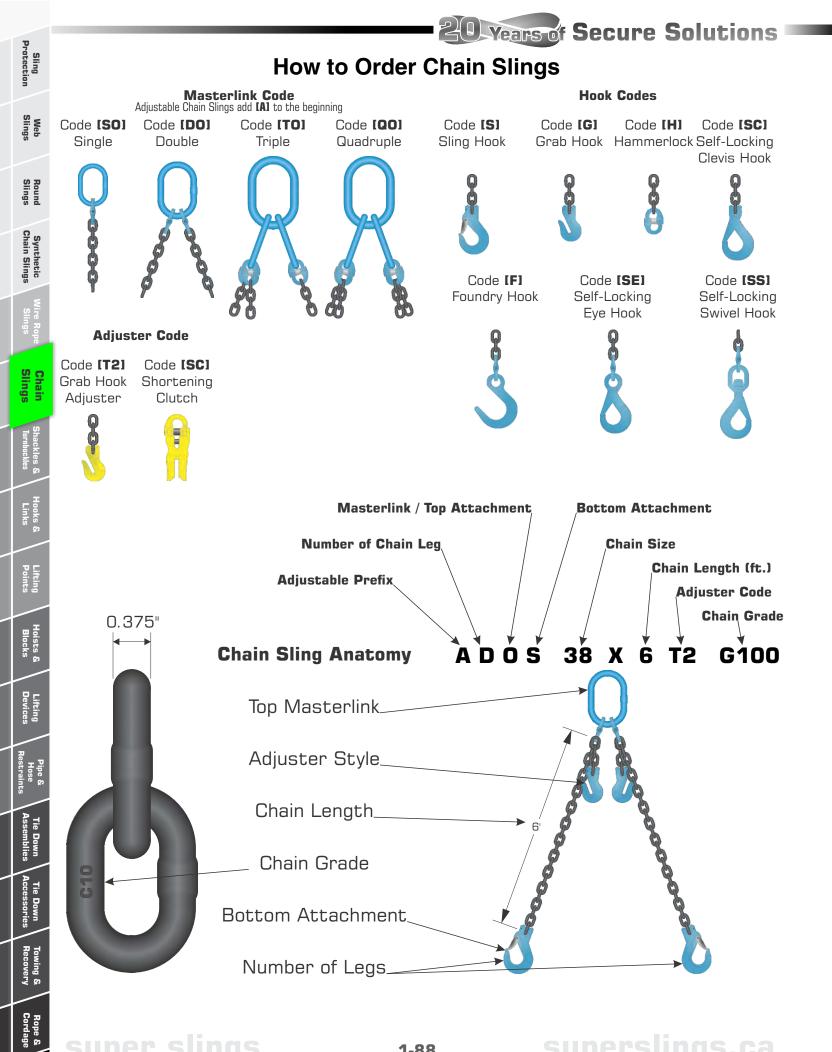
Hooks & Links

Lifting Points

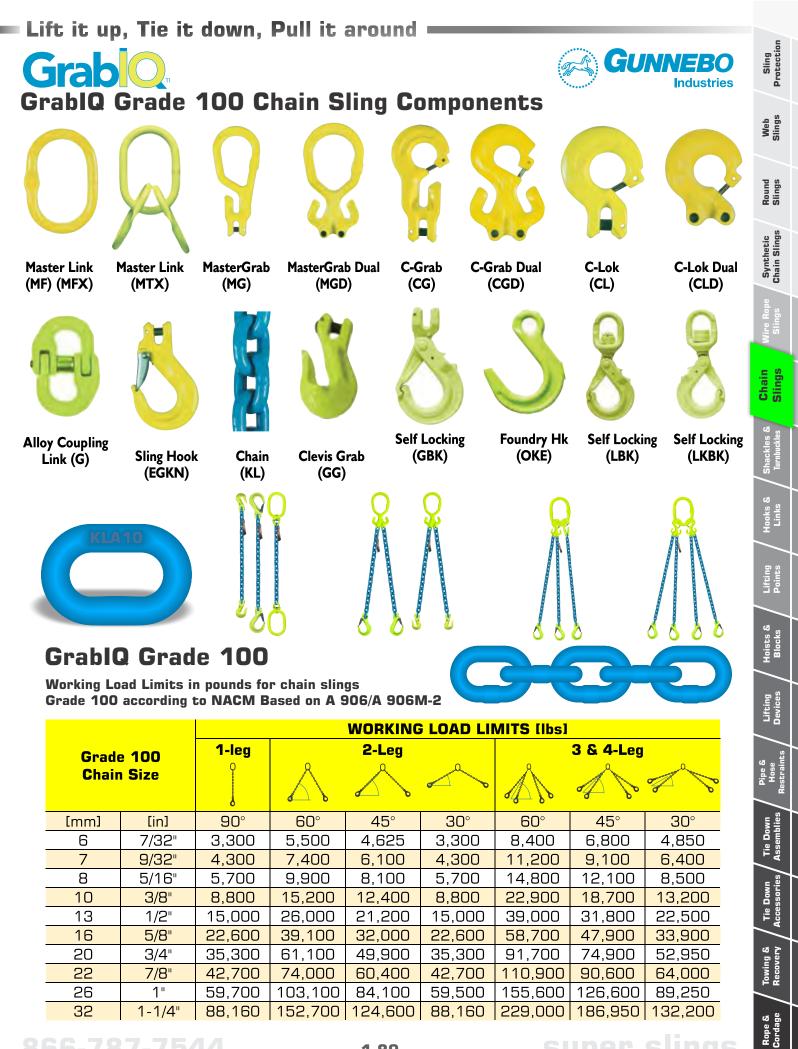
Hoists & Blocks

Lifting Devices

Rope & Cordage



super slings



866-787-7544

# X-003 G-100 Masterlink

### Masterlink

Sling Protection

Web Sling

Round

Synthetic Chain Slings

Chain

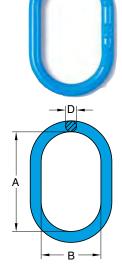
Product details

### Aapplication

- Quenched and Tempered Alloy Steel. •
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with ASTM A906/A906M, ASTMA952/A952M, ASME B30.9, ASME B30.10, ASME B30.26 andOHSA 1910.184, EN-1677-4
- Proof Load tested at 2.5 times the WLL with certification for each batch manufactured.
- Design Factor 4:1.

Safety is our first priority

- Fatigue rated to 20,000 cycles at 1.5 times the WLL.
- Tempering temperature at a minimum of 400°C.
- Designed for Wire Rope and Chain.
- Each link is marked with batch number that links to the test certificate with traceability to raw materials.



| ltem No.   | WL<br>0-4 | _       | Chain<br>Grade 1 |           |       | Dimensions (in) |      |      | Net<br>Weight |
|------------|-----------|---------|------------------|-----------|-------|-----------------|------|------|---------------|
|            | 4:1 lbs   | 5:1 lbs | 1 Leg            | 2 Leg     | (in)  | D               | IL   | IW   | lbs           |
| X-003-06   | 3,100     | 2,500   | 7/32             |           | 3/8   | 0.43            | 3.94 | 2.36 | 0.44          |
| X-003-0806 | 6,400     | 5,100   | 9/32-5/16        | 7/32      | 1/2   | 0.55            | 4.72 | 2.76 | 1.10          |
| X-003-1008 | 12,000    | 9,000   | 3/8              | 9/32-5/16 | 5/8   | 0.67            | 5.51 | 3.15 | 1.54          |
| X-003-13   | 15,000    | 12,300  | 1/2              |           | 3/4   | 0.75            | 5.91 | 3.54 | 2.43          |
| X-003-1310 | 19,000    | 15,000  | 1/2              | 3/8       | 7/8   | 0.87            | 6.30 | 3.74 | 3.31          |
| X-003-16   | 22,000    | 17,600  | 5/8              |           | 1     | 0.98            | 7.48 | 4.33 | 5.07          |
| X-003-1613 | 31,100    | 24,900  | 5/8              | 1/2       | 1 1/8 | 1.10            | 7.09 | 4.13 | 5.95          |
| X-003-19   | 35,300    | 28,200  | 3/4              |           | 1 1/4 | 1.18            | 7.87 | 4.72 | 7.72          |
| X-003-2216 | 46,300    | 37,000  | 7/8              | 5/8       | 1 3/8 | 1.34            | 9.45 | 5.51 | 11.68         |
| X-003-26   | 58,400    | 46,700  | 1                |           | 1 1/2 | 1.50            | 9.84 | 5.91 | 16.31         |

# **DNV 2.7-1 Master Link Assembly**

### **Clevis Shackle**

Product details

### Aapplication

- Material: Alloy Steel
- Standard: EN 1677-4, ASME B30.26, DNV 2.7-1
- Finish: Painted Orange

super slings

Design Factor: 5:1 (Wire Sling)

OCEANSIDE

- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s) •

| Item Code | w         | LL        |      | Dimensions (in) |      |      |       |      |       |
|-----------|-----------|-----------|------|-----------------|------|------|-------|------|-------|
|           | lbs (4:1) | lbs (5:1) | D    | IL              | IW   | d    | il    | lw   | lbs   |
| 2-MA16QA  | 11,200    | 9,000     | 0.63 | 5.91            | 2.95 | 0.51 | 4.92  | 2.36 | 2.90  |
| 2-MA23QA  | 15,900    | 12,800    | 0.87 | 10.63           | 5.51 | 0.63 | 5.91  | 2.95 | 8.40  |
| 2-MA22QAS | 24,200    | 19,500    | 0.87 | 6.38            | 3.54 | 0.79 | 5.51  | 2.76 | 7.90  |
| 2-MA25QA  | 24,200    | 19,500    | 0.98 | 10.63           | 5.51 | 0.79 | 5.51  | 2.76 | 11.70 |
| 2-MA26QA  | 32,400    | 26,000    | 1.10 | 10.63           | 5.51 | 0.79 | 5.51  | 2.76 | 13.00 |
| 2-MA28QAS | 39,900    | 32,000    | 1.10 | 7.87            | 4.33 | 0.87 | 5.51  | 2.76 | 12.10 |
| 2-MA32QA  | 46,900    | 37,700    | 1.26 | 10.63           | 5.51 | 1.02 | 7.48  | 4.02 | 21.40 |
| 2-MA36QA  | 63,300    | 50,700    | 1.42 | 10.63           | 5.51 | 1.10 | 7.48  | 3.94 | 26.20 |
| 2-MA40QA  | 77,400    | 61,900    | 1.57 | 11.02           | 6.10 | 1.26 | 7.87  | 4.33 | 36.10 |
| 2-MA45QA  | 105,400   | 84,400    | 1.77 | 12.60           | 6.89 | 1.42 | 8.86  | 4.92 | 51.80 |
| 2-MA50QA  | 123,900   | 99,200    | 1.97 | 13.78           | 7.68 | 1.57 | 10.24 | 5.12 | 71.20 |



# 9 Years of Secure Solutions

Tie Do



# V-line Grade 80 Alloy Master Links

### Masterlink

Product details

### Application

- Alloy Steel Quenched and Tempered
- Individually proof tested per ASTM 906/952 prescribed loads
- Meet EN1677 standard (20,000 cycle fatigue test)
- Permanently embossed with VGD, size, model number and trace code
- Approved for overhead lifting when all components are grade 80
- Proof tested to 2 times the Working Load Limit (WLL)
- Design factor 4:1

| Item Code  | Di            | Dimensions |       |        | (lbs)  | Weight | Chain Siz | e Gr. 80 |
|------------|---------------|------------|-------|--------|--------|--------|-----------|----------|
|            | А             | В          | С     | (4:1)  | (5:1)  | (lbs)  | Single    | Double   |
| 5983-00046 | (1/2") 0.50   | 2.75       | 4.72  | 6,100  | 4,900  | 0.83   | 9/32-5/16 | 9/32     |
| 5983-10001 | (5/8") 0.63   | 3.15       | 5.50  | 7,750  | 6,200  | 1.50   | 3/8       | 5/16     |
| 5983-10002 | (3/4") 0.75   | 3.75       | 6.30  | 12,300 | 9,800  | 2.60   | 1/2       | 3/8      |
| 5983-10003 | (1") 1.00     | 4.33       | 7.50  | 20,800 | 16,600 | 5.40   | 5/8       | 1/2      |
| 5983-10004 | (1-1/4") 1.25 | 5.10       | 9.00  | 31,300 | 25,000 | 10.30  | 3/4       | 5/8      |
| 5983-10005 | (1-1/2") 1.50 | 5.90       | 10.80 | 49,000 | 39,200 | 16.50  | 7/8       | 3/4      |
| 5983-10006 | (1-3/4") 1.75 | 7.10       | 13.40 | 73,500 | 58,800 | 28.20  | 1         | 7/8      |

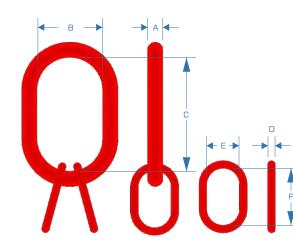
# V-line Grade 80 Alloy Sub-assembly

### **Masterlink Assembly**

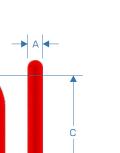
Product details

### **A**application

- Alloy Steel Quenched and Tempered
- Individually proof tested per ASTM 906/952 prescribed loads
- Meet EN1677 standard (20,000 cycle fatigue test)
- Permanently embossed with VGD, size, model number and trace code
- Approved for overhead lifting when all components are grade 80
- Proof tested to 2 times the Working Load Limit (WLL)
- Design factor 4:1



| Item Code  | Chain<br>Size |               | Dimensions (in) |       |      |      |      |        |       |  |  |  |
|------------|---------------|---------------|-----------------|-------|------|------|------|--------|-------|--|--|--|
|            |               | А             | В               | С     | D    | E    | F    | (lbs)  | (lbs) |  |  |  |
| 5994-00401 | 9/32          | (3/4") 0.75   | 3.75            | 6.30  | 0.50 | 2.36 | 4.33 | 12,300 | 4.20  |  |  |  |
| 5994-00601 | 3/8           | (1") 1.00     | 4.33            | 7.50  | 0.75 | 3.75 | 6.30 | 20,800 | 10.70 |  |  |  |
| 5994-00801 | 1/2           | (1-1/4") 1.25 | 5.10            | 9.00  | 1.00 | 4.33 | 7.50 | 31,300 | 22.30 |  |  |  |
| 5994-01001 | 5/8           | (1-1/2") 1.50 | 5.90            | 10.80 | 1.13 | 5.10 | 9.05 | 49,000 | 32.40 |  |  |  |
| 5994-01201 | 3/4           | (1-3/4") 1.75 | 7.10            | 13.40 | 1.25 | 5.10 | 9.05 | 73,500 | 58.60 |  |  |  |



Sling Protection

Web

Round Slings

les &

Lifting Points

Tie Down Assemblies

Tie Down Accessories,

Towing & Recovery

Rope & Cordage

Lifting Devices

# X-015 G-100 Connecting Link.

### **Connecting Link**

Sling Protection

Web

Round Slings

Synthetic Chain Slings

Chain Slings

Product details

| Item Code | WLL     | Chain<br>Size | Dimension<br>s [in] |      |      |      | Net<br>Weight |
|-----------|---------|---------------|---------------------|------|------|------|---------------|
|           | 4:1 lbs | [in]          | А                   | В    | D    | К    | lbs           |
| X-015-06  | 3,200   | 7/32          | 0.59                | 0.71 | 0.28 | 1.77 | 0.18          |
| X-015-07  | 5,700   | 9/32-5/16     | 0.71                | 0.98 | 0.35 | 2.32 | 0.44          |
| X-015-10  | 8,800   | 3/8           | 0.98                | 1.10 | 0.43 | 2.72 | 0.66          |
| X-015-13  | 15,000  | 1/2           | 1.18                | 1.50 | 0.63 | 3.62 | 1.54          |
| X-015-16  | 22,600  | 5/8           | 1.42                | 1.61 | 0.75 | 3.98 | 2.65          |
| X-015-20  | 35,300  | 3/4           | 1.65                | 1.97 | 0.91 | 4.80 | 4.63          |
| X-015-22  | 42,700  | 7/8           | 1.93                | 2.48 | 0.94 | 5.98 | 7.72          |
| X-015-26  | 59,700  | 1             | 2.17                | 2.60 | 1.18 | 6.38 | 10.58         |

# **Vears of Secure Solutions**

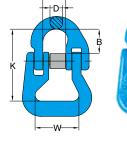
# X-016 G-100 Web Sling Connector



Safety is our first priority"

**Connecting Link** Product details

| Item Code | WLL     | Chain<br>Size |      | Dim  | ensions | [in] |      | Net<br>Weight |
|-----------|---------|---------------|------|------|---------|------|------|---------------|
|           | 4:1 lbs | [in]          | А    | В    | D       | К    | W    | lbs           |
| X-016-06  | 3,200   | 7/32          | 0.59 | 0.67 | 0.28    | 2.17 | 1.50 | 0.44          |
| X-016-07  | 5,700   | 9/32-5/16     | 0.71 | 0.87 | 0.35    | 2.44 | 1.57 | 0.66          |
| X-016-10  | 8,800   | 3/8           | 0.98 | 1.02 | 0.43    | 3.07 | 1.85 | 1.32          |
| X-016-13  | 15,000  | 1/2           | 1.18 | 1.38 | 0.63    | 3.74 | 2.09 | 2.43          |
| X-016-16  | 22,600  | 5/8           | 1.42 | 1.50 | 0.75    | 4.53 | 2.64 | 4.41          |
| X-016-20  | 35,300  | 3/4           | 1.65 | 1.81 | 0.87    | 5.20 | 3.15 | 7.05          |
| X-016-22  | 42,700  | 7/8           | 1.93 | 2.32 | 0.94    | 7.36 | 4.92 | 16.98         |





# X-032 G-100 100 Web Sling Hook

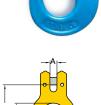
### **Coupling Self-Locking Hook**

Product details



|             |        |                 |      |      | Sujery is | our just prior | uy   |               |    |
|-------------|--------|-----------------|------|------|-----------|----------------|------|---------------|----|
| ltem No.    |        | g Load<br>(lbs) |      | Di   | mensio    | ns (mm)        |      | Net<br>Weight |    |
|             | 4:1    | 5:1             | Н    | К    | Р         | Т              | W    | lbs           | ĮD |
| 74-X-032-01 | 2,200  | 1,700           | 0.79 | 3.50 | 0.98      | 0.59           | 1.69 | 1.54          |    |
| 74-X-032-02 | 4,400  | 3,500           | 1.06 | 4.57 | 1.18      | 0.79           | 2.09 | 3.31          |    |
| 74-X-032-03 | 6,600  | 5,200           | 1.26 | 4.69 | 1.26      | 1.02           | 2.52 | 5.29          |    |
| 74-X-032-05 | 11,000 | 8,800           | 1.73 | 5.71 | 1.77      | 1.50           | 2.40 | 7.72          | -  |





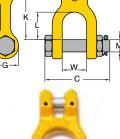




\*Special Order\*

Product details

| ltem Code | WLL [lbs] | Chain<br>Size |      |      | Dim  | ensions | [in] |      |      | Net<br>Weight |  |
|-----------|-----------|---------------|------|------|------|---------|------|------|------|---------------|--|
|           | 4:1       | [in]          | А    | С    | G    | К       | L    | Μ    | W    | lbs           |  |
| 8-066-07  | 4,500     | 9/32-5/16     | 0.35 | 3.11 | 1.34 | 2.32    | 1.38 | 0.63 | 1.30 | 0.88          |  |
| 8-066-10  | 7,100     | 3/8           | 0.43 | 3.66 | 1.57 | 3.07    | 1.89 | 0.79 | 1.34 | 1.76          |  |
| 8-066-13  | 12,000    | 1/2           | 0.55 | 4.65 | 1.73 | 3.86    | 2.52 | 0.87 | 1.93 | 3.09          |  |
| 8-066-16  | 18,100    | 5/8           | 0.71 | 5.55 | 2.13 | 4.41    | 2.72 | 1.10 | 2.36 | 5.29          |  |



Tie

Tie Dowr

# Lift it up, Tie it down, Pull it around

# X-043 G-100 Clevis Sling Hooks

### **Clevis Sling Hook**

Product details

### **A**application

- Quenched and Tempered Alloy Steel.
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with EN 1677-2 and ASME B30.26. ASME B30.10, PAS1061.
- Certified by DGUV GS-0A-15-05 & DGUV GS-MO-15-05



Safety is our first priority<sup>™</sup>

- For load pin replacement Proof Load tested at 2.5 times the WLL with certification for each batch manufactured.
- Design Factor 4:1.
- Fatigue rated to 20,000 cycles at 1.5 times the WLL.
- Tempering temperature minimum 400°C
- Magnaflux crack detection is performed 100% on each batch.





For latch replacement





| Item Code  | WLL     | Chain<br>Size |      | Dimensions [in] |      |      |      |       |  |  |  |  |
|------------|---------|---------------|------|-----------------|------|------|------|-------|--|--|--|--|
|            | 4:1 lbs | [in]          | А    | Н               | К    | P1   | Т    | lbs   |  |  |  |  |
| X-043/S-06 | 3,200   | 7/32          | 0.24 | 0.91            | 3.82 | 0.91 | 0.59 | 0.66  |  |  |  |  |
| X-043/S-07 | 5,700   | 9/32-5/16     | 0.35 | 0.87            | 3.86 | 1.06 | 0.71 | 1.32  |  |  |  |  |
| X-043/S-10 | 8,800   | 3/8           | 0.43 | 1.18            | 4.80 | 1.34 | 0.94 | 2.43  |  |  |  |  |
| X-043/S-13 | 15,000  | 1/2           | 0.55 | 1.46            | 5.79 | 1.73 | 1.18 | 5.07  |  |  |  |  |
| X-043/S-16 | 22,600  | 5/8           | 0.67 | 1.65            | 6.54 | 1.89 | 1.54 | 8.38  |  |  |  |  |
| X-043/S-20 | 35,300  | 3/4           | 0.94 | 2.52            | 8.15 | 2.24 | 1.89 | 19.18 |  |  |  |  |
| X-043/S-22 | 42,700  | 7/8           | 0.98 | 2.40            | 8.54 | 2.87 | 2.05 | 20.94 |  |  |  |  |

# X-026 G-100 Self-Locking Clevis Hook

### **Clevis Self-Locking Hook**

Product details

### **A**application

- Quenched and Tempered Alloy Steel.
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with EN 1677-3 and ASME B30.26. ASME B30.10, PAS1061.
- Certified by DGUV GS-MO-15-05





- Proof Load tested at 2.5 times the WLL with certification for
- each batch manufactured.
- Design Factor 4:1.

.

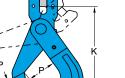
- Fatigue rated to 20,000 cycles at 1.5 times the WLL.
- Tempering temperature min 400°C Magnaflux crack detection is performed 100% on each batch.



X-P026 For load pin replacement 8-P025T For trigger replacement



| Item Code | WLL     | Chain<br>Size |      | Din  | nensions (i | nl   |      | Net<br>Weight |
|-----------|---------|---------------|------|------|-------------|------|------|---------------|
|           | 4:1 lbs | [in]          | А    | Н    | К           | Р    | Т    | lbs           |
| X-026-06  | 3,200   | 7/32          | 0.24 | 0.75 | 3.66        | 1.10 | 0.59 | 0.88          |
| X-026-07  | 5,700   | 9/32-5/16     | 0.35 | 0.94 | 4.69        | 1.34 | 0.79 | 1.98          |
| X-026-10  | 8,800   | 3/8           | 0.43 | 1.18 | 5.59        | 1.73 | 1.02 | 3.09          |
| X-026-13  | 15,000  | 1/2           | 0.55 | 1.54 | 7.01        | 2.01 | 1.18 | 6.61          |
| X-026-16  | 22,600  | 5/8           | 0.71 | 1.93 | 8.39        | 2.36 | 1.42 | 11.02         |
| X-026-20  | 35,300  | 3/4           | 0.83 | 2.56 | 9.61        | 2.76 | 2.09 | 24.25         |
| X-026-22  | 42,700  | 7/8           | 0.94 | 2.48 | 10.75       | 3.15 | 1.93 | 29.76         |



866-787-7544

# super slings

Sling Protection

Web

Hoists

Lifting Devices

Assemblie Tie Down

Tie Down Accessori

Towing & Recovery

Rope & Cordage

# X-042N G-100 Clevis Grab Hook

### **Clevis Sling Hook**

Product details

### **A**application

- Quenched and Tempered Alloy • Steel.
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with DIN PAS 1061, EN 1677-1 and ASTM A952/A 952M.
- Proof Load tested at 2.5 times the WLL with certification for each batch manufactured.



- Design Factor 4:1, Fatigue rated to 20,000 cycles at 1.5 times the WLL.
- Tempering temperature min 400°C
- Not for use with Omega Link
- Enables full WLL while in use, thanks to supporting wings which prevent chain link deformation.
- Certified by DGUV GS-MO-15-05

Safety is our first priority"



Years of Secure Solutions



| Item Code | WLL     | Chain<br>Size |      |       | Dimensi | ions [in] |      |      | Net<br>Weight |
|-----------|---------|---------------|------|-------|---------|-----------|------|------|---------------|
|           | 4:1 lbs | [in]          | А    | F     | Н       | К         | L    | Р    | lbs           |
| X-042-06  | 3,200   | 7/32          | 0.28 | 0.98  | 0.71    | 1.85      | 3.11 | 0.31 | 0.44          |
| X-042-07  | 5,700   | 9/32-5/16     | 0.39 | 1.18  | 0.87    | 2.13      | 3.66 | 0.39 | 0.88          |
| X-042-10  | 8,800   | 3/8           | 0.43 | 1.61  | 1.14    | 3.03      | 5.04 | 0.51 | 1.76          |
| X-042-13  | 15,000  | 1/2           | 0.59 | 2.05  | 1.50    | 3.90      | 6.50 | 0.67 | 3.53          |
| X-042-16  | 22,600  | 5/8           | 0.71 | 2.24  | 1.77    | 4.49      | 7.68 | 0.83 | 5.95          |
| X-042-20  | 35,300  | 3/4           | 0.87 | 10.58 |         |           |      |      |               |
| X-042-22  | 42,700  | 7/8           | 0.94 | 14.11 |         |           |      |      |               |

# X-046 G-100 Clevis Foundry Hook

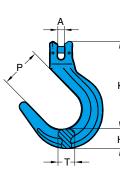
### **Clevis Foundry Hook**

Product details

### **A**application

- Quenched and Tempered Alloy Steel. •
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with DIN PAS 1061 and ASTM A952/A 952M.EN 1677-1.
- Proof Load tested at 2.5 times the WLL with certification for each batch manufactured.
- Design Factor 4:1.
- Fatigue rated to 20,000 cycles at 1.5 times the WLL. .
- Tempering temperature minimum 400°C
- Not used for general chain sling applications, rather for use where a large throat opening is necessary.
- Before using the hook, check whether hooks without safety latches are allowed to be used for the particular application.







| Item Code | WLL     | Chain<br>Size |      | Din  | nensions (i | n]   |      | Net<br>Weight |
|-----------|---------|---------------|------|------|-------------|------|------|---------------|
|           | 4:1 lbs | [in]          | А    | Н    | К           | Р    | Т    | lbs           |
| X-046-07  | 5,700   | 9/32-5/16     | 0.35 | 1.06 | 5.24        | 2.44 | 0.75 | 2.09          |
| X-046-10  | 8,800   | 3/8           | 0.43 | 1.26 | 6.42        | 2.91 | 0.91 | 3.97          |
| X-046-13  | 15,000  | 1/2           | 0.55 | 1.54 | 7.87        | 3.46 | 1.26 | 7.94          |
| X-046-16  | 22,600  | 5/8           | 0.71 | 1.85 | 9.41        | 3.86 | 1.61 | 14.11         |
| X-046-20  | 35,300  | 3/4           | 0.83 | 2.44 | 12.01       | 4.45 | 1.81 | 24.69         |



super slings

# superslings.ca

Sling Protection

Web Sling

Round

Rope & Cordage

E

# Lift it up, Tie it down, Pull it around =

# X-027 G-100 Self-Locking Swivel Hook

### G-100 Eye Self Locking Hook

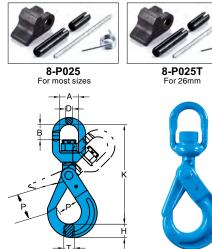
Product details

### **A**application

- Quenched and Tempered Alloy Steel.
- At least 25% greater WLL than traditional G80 products.
- Manufactured in accordance with EN 1677- 3 and ASME B30.26, ASME B30.10.
- Certified by DGUV GS-OA-15-05 & DGUV GS-MO-15-05



- Proof Load tested at 2.5 times the WLL with certification for each batch manufactured.
- Design Factor 4:1, Fatigue rated to 20,000 cycles at 1.5 times the WLL.
- Tempering temperature minimum 400°C
- Magnaflux crack detection is performed 100% on each batch.





| Item Code | WLL    | [lbs]  | Chain<br>Size |      |      | Dim  | ensions | [in]  |      |      | Net<br>Weight |
|-----------|--------|--------|---------------|------|------|------|---------|-------|------|------|---------------|
|           | 4:1    | 5:1    | [in]          | А    | В    | D    | Н       | К     | Р    | Т    | Lbs           |
| X-027-06  | 3,200  | 2,600  | 7/32          | 1.26 | 0.87 | 0.47 | 0.75    | 5.87  | 1.10 | 0.59 | 1.54          |
| X-027-07  | 5,700  | 4,600  | 9/32-5/16     | 1.42 | 1.14 | 0.51 | 0.94    | 7.32  | 1.34 | 0.79 | 2.65          |
| X-027-10  | 8,800  | 7,000  | 3/8           | 1.61 | 1.34 | 0.63 | 1.18    | 8.58  | 1.73 | 1.02 | 4.41          |
| X-027-13  | 15,000 | 12,000 | 1/2           | 1.81 | 1.69 | 0.83 | 1.54    | 10.87 | 2.01 | 1.18 | 9.04          |
| X-027-16  | 22,600 | 18,100 | 5/8           | 2.40 | 1.97 | 0.91 | 1.93    | 12.95 | 2.36 | 1.42 | 15.87         |
| X-027-20  | 35,300 | 28,200 | 3/4           | 2.91 | 3.23 | 0.98 | 2.56    | 15.24 | 2.76 | 2.09 | 28.66         |
| X-027-22  | 42,700 | 34,200 | 7/8           | 3.82 | 3.74 | 1.30 | 2.48    | 17.99 | 3.15 | 1.93 | 44.09         |
| X-027-26  | 59,700 | 47,800 | 1             | 4.84 | 4.53 | 2.05 | 2.72    | 21.06 | 3.90 | 2.20 | 72.75         |

# VCGH Cobra - Clevis Hoist Hooks

### **Clevis Type Hoist Hook**

Product details

### **A**application

- A robust improved version without a protruding hook tip.
- The forged safety latch engages in the tip of the hook and • is thus protected against lateral bending.
- With a triple coiled corrosion protected double leg spring. •
- Thickened tip of the hook to prevent misuse.
- Wear marks on both sides.
- Gauge marks for measuring the width of the hook opening
- Connecting bolt and tensioning sleeve are pre-assembled. •



| Item Code | WLL [lbs] | Chain<br>Size |      |      | I    | Dimensi | ions (in | 1    |      |      | Net<br>Weight |
|-----------|-----------|---------------|------|------|------|---------|----------|------|------|------|---------------|
|           | 4:1       | [in]          | Т    | А    | В    | С       | D        | E    | F    | G    | Lbs           |
| 7984439   | 1,390     | 5/32          | 2.20 | 0.79 | 0.55 | 0.49    | 0.51     | 0.55 | 0.71 | 2.05 | 0.26          |
| 7100498   | 3,300     | 7/32          | 2.99 | 1.50 | 0.87 | 0.63    | 0.79     | 0.94 | 0.98 | 2.83 | 0.86          |
| 7100499   | 5,500     | 5/16          | 3.82 | 1.97 | 1.10 | 0.79    | 1.10     | 1.26 | 1.18 | 3.74 | 1.72          |
| 7100500   | 8,800     | 3/8           | 4.25 | 2.36 | 1.42 | 1.02    | 1.42     | 1.54 | 1.38 | 4.65 | 3.31          |
| 7100501   | 15,000    | 1/2           | 4.96 | 2.99 | 1.81 | 1.18    | 1.46     | 1.89 | 1.57 | 5.31 | 6.26          |
| 7100502   | 22,000    | 5/8           | 5.98 | 3.27 | 2.20 | 1.42    | 1.93     | 2.28 | 1.89 | 6.34 | 10.34         |

### WARNING: NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death! For full user manual please visit www.superslings.ca





Sling Protection

Round Slings

Web

Synthetic Chain Slings

Chain Slings

Lifting Points

loists

Lifting Devices

Tie Down Assembl<u>ies</u>

Tie Down Accessories

Towing & Recovery

Rope & Cordage



# Lift it up, Tie it down, Pull it around Midgrab Chain Shortener

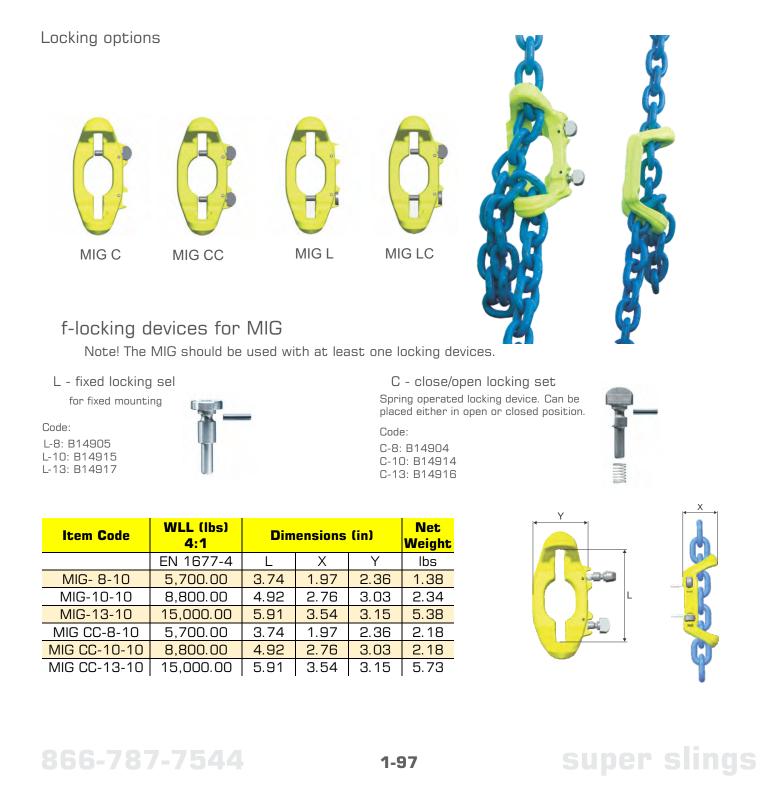
### **Chain Shortener**

Product details

### Aapplication

- Instant mounting and positioning on any part of the chain.
- Designed to prevent inadvertent chain disengagement.
- Can be set idle on the chain leg when shortening is not required
- For high visibility in the field.
- Fatigue tested
- Forged alloy steel
- Quenched and tempered

- 100% proof load of each MIG
- Secure mounting with locking set on any desired part of the chain with one chain direction open for shortening
- Close-open function in both chain directions for safe retention of the chain
- Spring and trigger in stainless steel
- Easy-to-use shortening in either chain direction up-down
- The design makes it easy to place the MIG on the chain correctly.



Web Slings

Round Slings

Synthetic Chain Slings

Chain Slings

Rope & Cordage

# 20 Years of Secure Solutions

### MG - Master Grab

All-in-one compact top link.

### Masterlink

Product details

Safety factor 4:1

Item Code

MG-6-10

MG-8-10

MG-10-10

MG-13-10

MG-16-10

Sling Protection

Web Slings

Round Slings

Synthetic Chain Slings

**Chain** Slings

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|----|----|
|    |    |
| G  | Ro |
| da | Pe |
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| WLL [lbs] | Chain Size |       | Dimensions [in] |      |      |       |  |  |  |
|-----------|------------|-------|-----------------|------|------|-------|--|--|--|
| 4:1       | [in]       | L     | А               | E    | D    | lbs   |  |  |  |
| 3,300     | 7/32       | 5.71  | 3.46            | 2.36 | 0.59 | 1.11  |  |  |  |
| 5,700     | 9/32-5/16  | 6.73  | 3.62            | 2.36 | 0.71 | 2.12  |  |  |  |
| 8,800     | 3/8        | 8.31  | 4.45            | 2.95 | 0.87 | 4.09  |  |  |  |
| 15,000    | 1/2        | 10.28 | 5.43            | 3.54 | 1.02 | 7.88  |  |  |  |
| 22,600    | 5/8        | 12.24 | 6.18            | 4.13 | 1.22 | 13.30 |  |  |  |
|           |            |       |                 |      |      |       |  |  |  |

# CG - C-Grab

Masterlink

Product details



Gunnebo

Industries

Net

For use with master link, eye hooks and choke. All GrabiQ Cconnectors can be equipped with Quick Pin.

| ltem Code | WLL [lbs] | Chain Size |         | Dimensions [in] |      |      |       |
|-----------|-----------|------------|---------|-----------------|------|------|-------|
|           | 4:1       | [in]       | L B E D |                 | lbs  |      |       |
| CG-6-10   | 3,300     | 7/32       | 3.15    | 0.43            | 0.94 | 0.75 | 0.79  |
| CG-8-10   | 5,700     | 9/32-5/16  | 4.21    | 0.47            | 1.26 | 0.94 | 1.74  |
| CG-10-10  | 8,800     | 3/8        | 5.28    | 0.59            | 1.57 | 1.14 | 3.48  |
| CG-13-10  | 15,000    | 1/2        | 6.77    | 0.71            | 2.05 | 1.50 | 7.28  |
| CG-16-10  | 22,600    | 5/8        | 8.46    | 0.87            | 2.52 | 1.85 | 13.40 |

Grab Q

# CL - C-Lok

Masterlink Product details

super slings

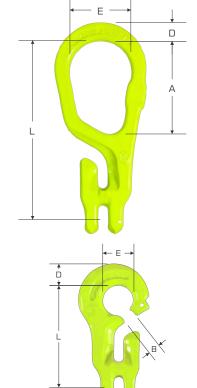


1-98

For use with master links, eye hooks and choke. All GrabiQ Cconnectors can be equipped with Quick Pin.

| ltem Code    | WLL [lbs] | Chain Size | Dimensions [in] |      |      |      | Net<br>Weight |
|--------------|-----------|------------|-----------------|------|------|------|---------------|
|              | 4:1       | [in]       | L               | В    | Ш    | D    | lbs           |
| CL-6-10      | 3,300     | 7/32       | 1.69            | 0.43 | 0.94 | 0.71 | 0.49          |
| CL-8-10      | 5,700     | 9/32-5/16  | 2.28            | 0.47 | 1.26 | 0.94 | 1.12          |
| CL-10-10     | 8,800     | 3/8        | 2.91            | 0.59 | 1.57 | 1.14 | 2.10          |
| <br>CL-13-10 | 15,000    | 1/2        | 3.70            | 0.71 | 2.05 | 1.50 | 4.69          |
| CL-16-10     | 22,700    | 5/8        | 4.69            | 0.87 | 2.52 | 1.89 | 8.20          |





# Lift it up, Tie it down, Pull it around —



### MGD - Master Grab Duo

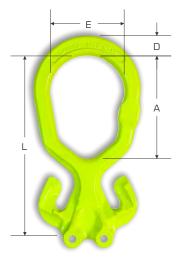
Masterlink

Product details



All-in-one compact top link for 2-leg slings. Safety factor 4:1

| Item Code | WLL [lbs] | Chain Size | Dimensions [in] |      |      | Net<br>Weight |       |
|-----------|-----------|------------|-----------------|------|------|---------------|-------|
|           | 4:1       | [in]       | L               | А    | Ш    | D             | lbs   |
| MGD-6-10  | 4,600     | 7/32       | 5.67            | 3.54 | 2.36 | 0.67          | 1.46  |
| MGD-8-10  | 7,700     | 9/32-5/16  | 6.73            | 3.94 | 2.95 | 0.83          | 2.97  |
| MGD-10-10 | 12,300    | 3/8        | 8.31            | 4.88 | 3.54 | 0.94          | 5.32  |
| MGD-13-10 | 20,900    | 1/2        | 10.31           | 5.87 | 4.13 | 1.22          | 10.46 |
| MGD-16-10 | 30,900    | 5/8        | 12.20           | 6.89 | 4.72 | 1.38          | 17.98 |



# CGD - C-Grab Duo

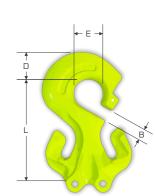
Masterlink

Product details



For use with master links. All GrabiQ C-connectors can be equipped with Quick  $\mathsf{Pin}.$ 

| Item Code | WLL [lbs] | Chain Size | Dimensions [in] |         |      | Net<br>Weight |       |
|-----------|-----------|------------|-----------------|---------|------|---------------|-------|
|           | 4:1       | [in]       | L               | L B E D |      | D             | lbs   |
| CGD-6-10  | 4,600     | 7/32       | 3.11            | 0.43    | 0.94 | 0.87          | 1.12  |
| CGD-8-10  | 7,700     | 9/32-5/16  | 4.21            | 0.47    | 1.26 | 1.14          | 2.61  |
| CGD-10-10 | 12,300    | 3/8        | 5.28            | 0.59    | 1.57 | 1.46          | 5.20  |
| CGD-13-10 | 20,900    | 1/2        | 6.81            | 0.75    | 1.89 | 1.89          | 12.06 |
| CGD-16-10 | 30,900    | 5/8        | 8.46            | 0.87    | 2.52 | 2.24          | 20.70 |



# CLD - C-Lok Duo

Masterlink

Product details



For use with master links. All GrabiQ C-connectors can be equipped with Quick Pin.

| Item Code | WLL [lbs] | Chain Size | Dimensions [in] |      |      | Net<br>Weight |       |
|-----------|-----------|------------|-----------------|------|------|---------------|-------|
|           | 4:1       | [in]       | L               | В    | E    | D             | lbs   |
| CLD-6-10  | 4,600     | 7/32       | 1.69            | 0.43 | 0.94 | 0.87          | 0.70  |
| CLD-8-10  | 7,700     | 9/32-5/16  | 2.28            | 0.47 | 1.26 | 1.14          | 1.55  |
| CLD-10-10 | 12,300    | 3/8        | 2.91            | 0.59 | 1.57 | 1.46          | 3.00  |
| CLD-13-10 | 20,900    | 1/2        | 3.70            | 0.71 | 2.05 | 1.81          | 5.85  |
| CLD-16-10 | 30,900    | 5/8        | 4.69            | 0.98 | 2.52 | 2.24          | 11.91 |



# super slings

Towing & Recovery

Synthetic Chain Slings

**Chain Slings** 

> Hooks & Links

> Lifting Points

Hoists & Blocks

Lifting Devices

Tie Down Assemblie:

Tie Down Accessorie

866-787-7544

# **MFH - Masterlink Hybrid**

### Masterlink

Sling Protection

Web

Round Slings

Synthetic Chain Slings

Chain Slings

Lifting

Hoists & Blocks

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Tie

Tie Dowi

Product details





Designed for crane hooks DIN 15401 and 15402. Designed for use with CL, CLD, CG and CGD. 3- and 4-leg chain slings require CLD / CGD.

| Item Code    | WLL [lbs]             |                        | С     | Chain Size [in] |           |       | Dimensions [in] |      |       |  |
|--------------|-----------------------|------------------------|-------|-----------------|-----------|-------|-----------------|------|-------|--|
|              | (SF 5:1)<br>EN 1677-4 | (SF 5:1)<br>ASTM A-952 | 1-leg | 2-leg           | 3-4-leg   | L     | Е               | D    | lbs   |  |
| MFH-1310-10  | 16,500                | 17,600                 | 1/2   | 3/8             | 9/32-5/16 | 9.06  | 4.92            | 0.87 | 4.63  |  |
| MFH-1613-10  | 22,000                | 30,000                 | 5/8   | 1/2             | 3/8       | 9.84  | 5.31            | 1.10 | 8.09  |  |
| MFH-2016-10  | 37,500                | 45,400                 | 3/4   | 5/8             | 1/2       | 11.02 | 5.31            | 1.26 | 11.62 |  |
| MFH-2220-10  | 61,700                | 68,100                 | 1     | 3/4             | 5/8       | 12.60 | 6.89            | 1.57 | 21.50 |  |
| MFHW-2220-10 | 58,600                | 61,700                 | 1     | 3/4             | 5/8       | 13.98 | 8.86            | 1.57 | 24.43 |  |

## MFX - Oversized Masterlink

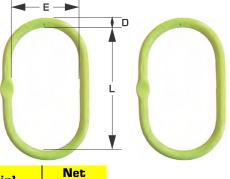
Masterlink

Product details



Industries

Oversized, for 1- and 2-leg sling. Designed for use with CL, CLD, CG and CGD.



9 Years of Secure Solutions

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| Item Code   | WLL [lbs]            |                        | WLL [lbs] Chain Size [in] |             | Dim   | Net<br>Weight |      |       |
|-------------|----------------------|------------------------|---------------------------|-------------|-------|---------------|------|-------|
|             | (SF 5:1)<br>EN1677-4 | (SF 5:1)<br>ASTM A-952 | 1-Leg                     | 1-Leg 2-Leg |       | Е             | D    | lbs   |
| MFX-108-10  | 9,400                | 11,500                 | -                         | 9/32-5/16   | 13.39 | 7.09          | 0.98 | 8.06  |
| MFX-1310-10 | 16,500               | 17,600                 | 1/2                       | 3/8         | 13.39 | 7.09          | 1.10 | 10.18 |
| MFX-1613-10 | 24,700               | 30,000                 | 5/8                       | 1/2         | 13.39 | 7.09          | 1.34 | 15.43 |
| MFX-2016-10 | 35,300               | 45,400                 | 3/4                       | 5/8         | 13.39 | 7.09          | 1.57 | 21.29 |

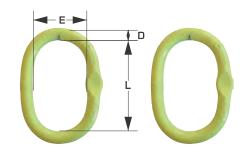
# MF - Masterlink w/ Engineered Flat

### Masterlink

Product details

**GUN** VEBO **Grab** Industries

For 1-, 2-, 3- and 4-leg slings. Designed for use with CL, CLD, CG and CGD. 3- and 4-leg chain slings require CLD / CGD.



| Item Code  | WLL [lbs]             |                        | Chain Size [in] |           |           | Dim  | Net<br>Weight |      |       |
|------------|-----------------------|------------------------|-----------------|-----------|-----------|------|---------------|------|-------|
|            | (SF 5:1)<br>EN 1677-4 | (SF 5:1)<br>ASTM A-952 | 1-leg           | 2-leg     | 3-4-leg   | L    | Е             | D    | lbs   |
| MF-6-10    | 3,300                 | 3,300                  | 7/32            | -         | -         | 3.94 | 2.36          | 0.43 | 0.51  |
| MF-86-10   | 5,500                 | 7,100                  | 7/32, 5/16      | 7/32      | -         | 4.92 | 2.76          | 0.55 | 0.97  |
| MF-108-10  | 8,800                 | 11,500                 | 3/8             | 9/32-5/16 | 7/32      | 5.51 | 3.15          | 0.67 | 1.70  |
| MF-1310-10 | 16,500                | 17,600                 | 1/2             | 3/8       | 9/32-5/16 | 6.30 | 3.74          | 0.87 | 3.26  |
| MF-1613-10 | 22,000                | 30,000                 | 5/8             | 1/2       | 3/8       | 7.48 | 4.33          | 1.10 | 6.17  |
| MF-2016-10 | 37,500                | 45,400                 | 3/4             | 5/8       | 1/2       | 9.45 | 5.51          | 1.34 | 11.64 |
| MF-2220-10 | 55,100                | 68,100                 | 7/8             | 3/4       | 5/8       | 9.84 | 5.91          | 1.57 | 17.13 |



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