



HALO

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Rigging Information

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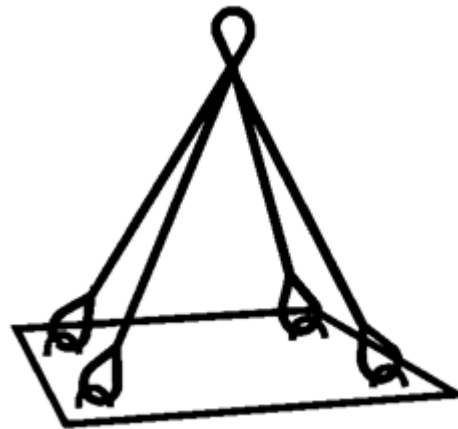


Rigging Information - Calculating Loads

As the horizontal angles of the legs of a sling decrease, the load on each leg increases. The effect is the same whether a single sling is used as a basket, or two slings are used with each in a straight pull as with a 2-legged bridle.

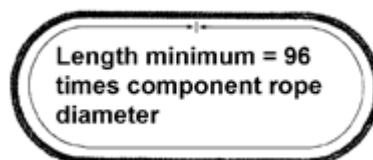
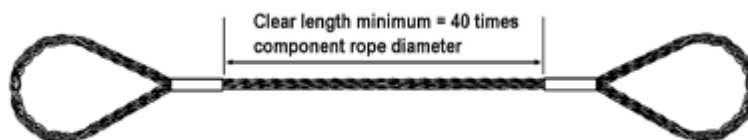
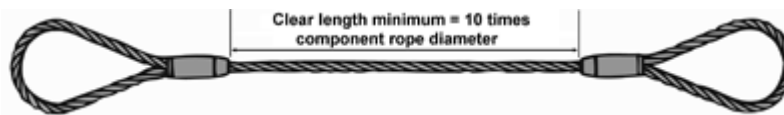
Load factor guidelines

Leg angle	Load factor
90°	1.000
85°	1.003
80°	1.015
75°	1.035
70°	1.064
65°	1.103
60°	1.154
55°	1.220
50°	1.305
45°	1.414
40°	1.555
35°	1.743
30°	2.000



Rigging Information - Minimum Sling Body Length

This is the length of wire rope between splices, sleeves or fittings. Generally the minimum body length for a single-part sling is equal to ten times the rope diameter. For Multi-part slings the minimum body length between splices is equal to forty times the component rope diameter. And for grommets the minimum circumference is equal to 96 times the component rope diameter.



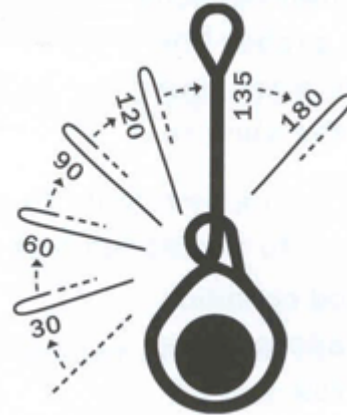
Rigging Information - Choker Hitch Rated Capacity Adjustment

Due to the body of the sling being used in the choke, there is a reduction in rated capacity. This is reflected in the choker rated capacity tables. Another reduction that must be considered is due to the "angle" of the choke (*not* the angle of the leg of the sling).

If a load is hanging free, the normal choke angle is approximately 135 degrees. When lifting and turning a load using a choker hitch, it is not uncommon to have a severe bend at the choke. When a choker hitch is used at an angle of less than 120 degrees, you must reduce the hitch's rated capacity as shown in the chart here. You must always adjust the rated capacity of the wire rope sling whenever you use a choker hitch to shift, turn or control a load, or when the pull is against the choke in a multi-leg lift.

As always, if more than one sling is used and the legs are not vertical, a further reduction in rated capacity must be made for the sling angle.

Warning: Choker hitches at angles greater than 135 degrees are not recommended. Extreme care should be taken to determine the angle of choke as accurately as possible.



Angle of choke in degrees	Rated Capacity Percent*
Over 120	100%
90-120	87%
60-89	74%
30-59	62%
0-29	49%

*Percent of sling's rated capacity in a choker hitch.

Rigging Information - Sling Eye

Sling eyes are designed to provide what amount to "small inverted slings" at the ends of the sling body. Therefore, the width of the eye opening will be affected by the same general forces, which apply to legs of a sling rigged as a basket.

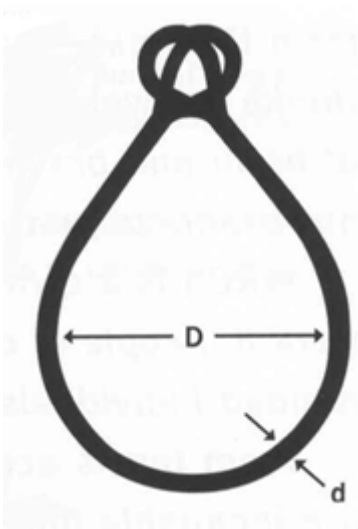
A sling eye should never be used over a hook or pin with a diameter larger than the natural width of the eye. Never force an eye onto a hook.

On the other hand, the eye should always be used on a hook or pin with at least the nominal diameter of the rope since applying the D/d ratio shows an efficiency loss of approximately 50% when the relationship is less than 1/1.



Rigging Information - D/d Ratios

When a sling is rigged as a basket, the diameter of the bend where the sling contacts the load can affect the sling's lifting capacity. How much the lifting capacity is affected can be calculated by dividing the diameter of the bend where the rope contacts the load (represented by "D") by the diameter of the rope or the component rope diameter in a multi-part sling (represented by "d"). For example, if the diameter of the bend ("D") is 10 and the component rope diameter ("d") is 1/2, the D/d Ratio is $10 \div 1/2$ or 20.



When D/d ratios smaller than those shown in the table below (or those shown in the footnotes below Rated Capacity Tables) are used, the rated capacity of the sling must be decreased.

Standard D/d ratios are applied to determine efficiency of various sling constructions

Mechanically spliced, single-part slings	25 times rope diameter
Hand spliced, sling-part slings	15 times rope diameter
Braided multi-part slings of 6 parts	25 times component rope diameter
Braided multi-part slings of 8 parts	25 times component rope diameter
Helically laid multi-part slings	25 times sling body diameter
Cable laid slings	10 times sling body diameter
Hand-tucked grommets and mechanically joined grommets	5 times body diameter