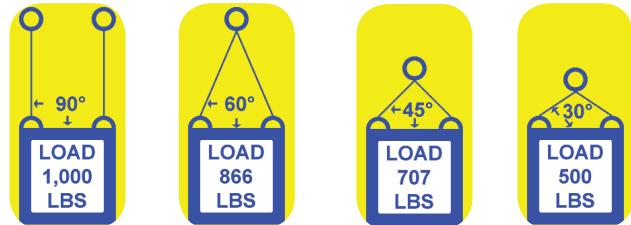




EFFECT OF LEG ANGLE ON SLING WORKING LOAD LIMIT (W.L.L.)

When slings are used at an angle (i.e. two slings or one sling in a basket attached to only one hoist hook), sling capacity is reduced. How much it is reduced depends on the degree of the angle. You can determine whether a sling will be rated high enough if you know the angle between the sling leg and the horizontal. Once you know this angle, multiply the sling's rating by the appropriate factor in the Angle Degree and Factor table. This will give you the sling's reduced rating. Horizontal sling angles less than 30° shall not be used.

SLING CAPACITY DECREASES AS THE HORIZONTAL ANGLE DECREASES



A sling capable of lifting 1,000 lbs. in a 90° horizontal basket hitch, can only lift 866 lbs. at a 60° angle, 707 lbs. at a 45° angle and 500 lbs. at a 30° angle. These calculations apply to all types of slings, web slings, polyester round slings, chain slings and wire rope slings.

ANGLE DEGREES	FACTOR
90°	1.0000
85°	0.9962
80°	0.9848
75°	0.9659
70°	0.9397
65°	0.9063
60°	0.8660

ANGLE DEGREES	FACTOR
55°	0.8192
50°	0.7660
45°	0.7071
40°	0.6428
35°	0.5736
30°	0.5000

REMOVAL CRITERIA FOR WEB SLINGS AND POLYESTER ROUND SLINGS:

Shall be removed from service if conditions such as the following are present:

- missing or illegible sling tag
- acid or caustic burns
- melting or charring of any parts of the sling or weld splatter that exposes core yarns
- holes, tears, cuts or snags or exposed core yarns
- broken or worn stitching in load bearing splices
- excessive abrasive wear
- knots in any part of the sling
- discoloration and brittle or stiff areas on any part of the sling; which may mean chemical or ultra-violet/sunlight damage.
- other conditions, including visible damage, that cause doubt as to the continued use of the sling

INSPECTIONS (all types of slings)

Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer.

Additional inspections shall be performed during sling use, where service conditions warrant. A complete inspection for damage to the sling shall be periodically performed by a designated person. Each sling and component shall be examined individually, taking care to expose and examine all surfaces. The sling shall be examined for conditions such as those listed below for the type of sling used and a determination made as to whether they constitute a hazard. These type of periodic inspections shall not exceed one year. The frequency of periodic inspections should be based on:

- Frequency of sling use.
- Severity of service conditions.
- Nature of lifts being made.
- Experience gained on the service life of slings used in similar circumstances.

Guidelines for the time intervals are:

- normal service—yearly
- severe service—monthly to quarterly
- special service—as recommended by a qualified person.
- Written records of the most recent periodic inspection shall be maintained.