

**Care**

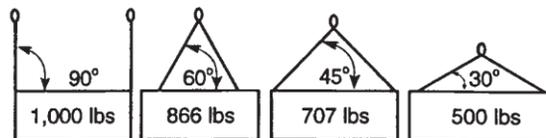
- Store away from possible mechanical damage, corrosion, moisture, dust, grit, and extreme temperatures or kinking.

**Repair:**

- Any hazardous condition disclosed by an inspection shall require repair or replacement. Repair is not an option

**LOAD ANGLE CHART**

Angle factor *must* be applied to calculate the reduced sling capacity when lifting force is not at 90° to the plane of the load!



Multiply angle factor x sling's vertical rated load to calculate the reduced capacity at that angle.

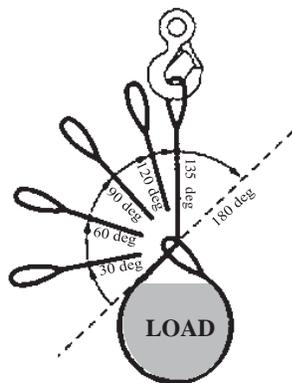
Angle	Factor
90°	1.0000
80°	0.9848
75°	0.9659
70°	0.9397
65°	0.9063
60°	0.8660
55°	0.8192
50°	0.7660
45°	0.7071
40°	0.6248
35°	0.5736
30°	0.5000

Because of the greatly reduced lifting capacity, use extra care when the sling to load angle, also known as the **horizontal** angle, is less than 45° and do not make lifts of less than 30° load angle. Example: A sling with adequate capacity could be broken because of increased tension resulting from angles of less than 30 degrees. When possible, use longer slings to minimize angular tension by increasing the angle.

**Choke Angle Effect**

Angle of Choke, deg	Rated Capacity, % [Note (1)]
Over 120	100
90 - 120	87
60 - 89	74
30 - 59	62
0 - 29	49

NOTE: (1) Percent of sling rated capacity in a choker hitch.



Rated capacity of sling shall be decreased when D/d ratios (see figure 14) will be smaller than cited in the lasted version of of ASME B-30.9 Chapter 2. Consult with the sling manufacturer for specific data or refer to the WRTB Wire Rope Sling Users Manual.

GENERAL NOTE:  
When D is 25 times the component rope diameter (d) the D/d is expressed as 25/1.

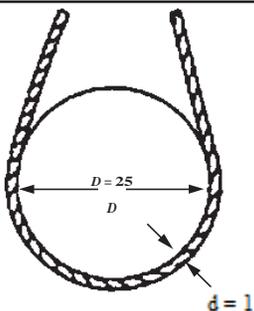


Fig. 14 D/d Ratio

## WARNING

Can fail if damaged, misued, or overloaded. Use only if trained.

DEATH or INJURY can occur from improper use or care.

Inspect before use and observe rated load to avoid death or personal injury.

Pad edges of load to avoid damage to sling.

RATED LOAD = RATED CAPACITY = WORKING LOAD LIMIT

### WIRE ROPE SLINGS

**Instructions for inspection use, care, and repair**

**Inspection:**

- Before each use: Inspect for broken wires, severe localized abrasions or scraping, kinking, crushing, bird caging, heat, corrosion, or other damage to rope structure.
- Inspect the end attachments and fittings for cracks, wear or deformation, hooks with twists or a throat opening increase or severe corrosion. Inspect for broken or missing wires.
- For strand laid and single part slings, no more than ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay. For cable laid and braided broken wire inspection criteria, consult the manufacturer. **If this wear or damage is present or if rated load tag is missing or illegible, remove from service and repair or replace sling.**
- If an inspection reveals that such wear or damage is present, replace the sling.
- Frequent inspection is done by the person handling the sling before each use and must include all of the before use items. Periodic inspections are required at least annually for normal service, quarterly or more frequently if in severe service or nearly constant use.
- Periodic inspections are performed by designated person who records the observed condition and determines when further use would be hazardous.

**Use:**

- Check weight of load and check tag to confirm that sling is rated adequately for the load (see load angle chart).
- Sling shall not be twisted, tied into knots or joined by knotting.
- Be sure the load cannot cut the sling during the lift by padding corners, edges, protrusions or abrasive surfaces; **use materials of sufficient strength and thickness.**
- Center load on base (bowl) of hook unless hook is designed for point loading.
- Balance, maintain control, and avoid jerking the load.
- Be alert for snagging of load and avoid dragging sling over rough surfaces and from under the load.
- Choker hitch must choke on rope, never on a splice or end fitting.
- Stand clear of load at all times. Persons are not to ride on sling or load.
- For use in abnormal conditions of heat, cold, chemical activity, consult the manufacturer.
- Rope slings must be used with compatible fittings, hooks and shackles
- Restrict use to temperatures below 400° F (fiber core wire rope below 180° F) & above -40° F.
- Important:** A single leg sling with hand tucked splice can unlay and drop the load if allowed to rotate during a lift. Always use a tag line.