DME Hoist Rings - Engineer the Lift

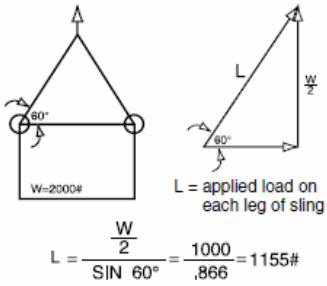
Engineer the lift!!

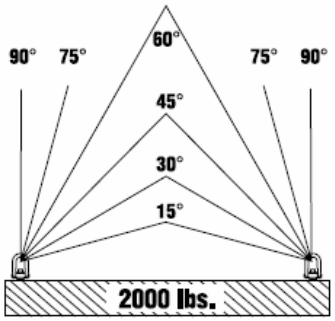
- **DME recommends the use of Center Pull Style swiveling and pivoting hoist rings, rather than conventional eye bolts.**
- **Are you using the proper hoist ring for the application?**
- **Is the hoist ring free to swivel and pivot? Any movement restrictions?**
- **Are lifting hole(s) in the proper location?**
- **Do you have the correct hole size for the hardware – safe lift capacity?**
- **Are the holes tapped deep enough to ensure full thread engagement? (See figure #3 on the Installation Information page)**
- **Recommended hole depth:**
  Steel – 1-1/2 times the bolt diameter (min.)
  Aluminum – 2 times the bolt diameter (min.)
- **RULE OF THUMB, IF IN DOUBT – DON'T!!**

Applied Load Changes With Sling Angle

DME swiveling hoist rings are designed and rated to be pulled at any angle at the rated load. However, the applied load on a multipoint lift will increase if the sling angle is less than 90°. Be sure to consider the sling angle when selecting lifting equipment. See illustration below.

Sample Calculation:





Sling Angle (Degrees)	Applied Load (Pounds)
90	1000
75	1040
60	1155
45	1410
30	2000
15	3860

DO'S

1. Observe working load limitations (be especially careful with eyebolts used for angle lifts – see sling angle chart).
2. Visually inspect hoist ring prior to use.
3. Fully tighten hoist ring to recommended torque. Full thread engagement is required (no space between swivel bushing and lift).
4. Assure proper thread depth – do not shim.
5. Make sure hoist rings have free travel – it must swivel and pivot without restrictions.
6. When installing in soft material, such as Aluminum, the minimum effective thread engagement should be two times the diameter of the bolt (1-1/2 times bolt diameter – steel).

DON'TS

1. Never pull a DME Center Pull Style hoist ring from the side.
2. Never use an oversized hook in eyebolts or hoist rings (see figure #1 on Installation Information page).
3. Never use excessive sling angle.
4. Never steam clean or degrease hoist rings (could cause rusting or binding).
5. Never apply shock loads.
6. Never allow the side of the hoist ring to make contact with the lift (see figure #2 on the Installation Information page).
7. DME hoist ring components are not interchangeable with other manufacturers hoist rings.

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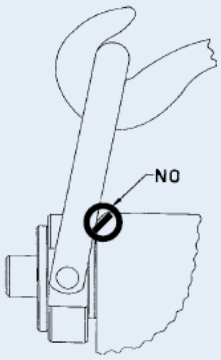
DME HOIST RING
INSTALLATION INFORMATION

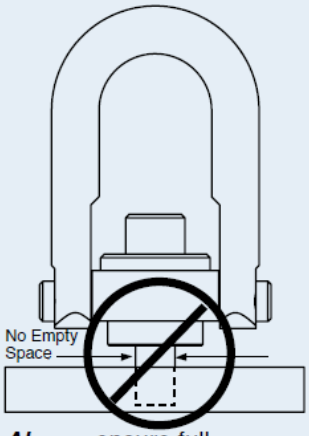
Never use a hook or other lifting device which will pry or tend to open the "U" shaped bar on DME Center-Pull Hoist Rings!

Fig. 1



After installation, check the hoist ring to be sure it swivels and pivots freely in all directions. **The side of the ring must not contact *anything*!**

Fig. 2



Always ensure full thread engagement when Installing hoist rings!

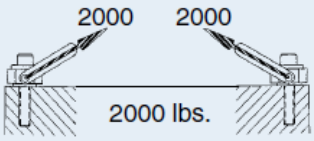
Fig. 3

Select the proper Hoist Ring for the job. Do not attempt to apply more then the rated load capacity. *The load capacity is marked on the hoist ring.*

Drill and tap the workpiece so that the hoist ring bolt is installed perpendicular to the surface of the workpiece. Countersink the tapped hole to prevent “swelling” of the top thread when the hoist ring bolt is torqued. The workpiece surface must be flat, providing complete contact for the hoist ring bushing.

Do not use spacers between the hoist ring bushing and the workpiece surface.

When installing in soft metal, such as aluminum, the minimum effective thread engagement should be two times the diameter of the bolt. When installing in steel, thread engagement should be 1-1/2 times the bolt diameter.



Depending upon the sling angle, **the applied load may be more than the weight being lifted.** Two point lifting of a 2000 pound weight, with a sling angle of 30°, will result in an applied load of 2000 pounds to ***each*** hoist ring!

Fig. 4

Always *tighten the bolt to the proper torque value*, which is stamped on the hoist ring.

Loosening of the bolt may develop during use. *Re-tightening to the required torque must be done whenever the bolt loosens*. The proper tightening torque is stamped on the hoist ring.

When lifting, apply force gradually. **DO NOT APPLY SHOCK LOADS**.

For through-hole applications, be sure that nut/washer are the same quality grade as the hoist ring

Periodic visual inspection and pull testing is recommended as damage can occur from improper usage.

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