

SAFETY INFORMATION

It is possible to make a lift, suspend certain objects or construct barriers using a wide variety of hardware options. With so many choices available, how does one insure he is using the right hardware for the job? As a supplier to the wholesale distributor market, AZ Lifting Hardware has no control over the selection of specific hardware for specific uses, and our Distributors have no control as to how our products are used. To insure your end user customer selects the right hardware for the job, and is prepared to use this hardware correctly, we recommend consultation of industry publications relating to specifications, standards and best practices for successful rigging and/or lifting. Excellent information can be obtained through US Government publications such as the Environment, Safety and Health Manual, Vol. II, Section 15, Document 15.3 regarding *Crane, Hoist and Rigging Safety* (www.llnl.gov) and the Department of Energy standard DOE-STD-1090-2004 regarding *Hoisting and Rigging Standards* (www.eh.doe.gov). The below charts and information will also assist you:

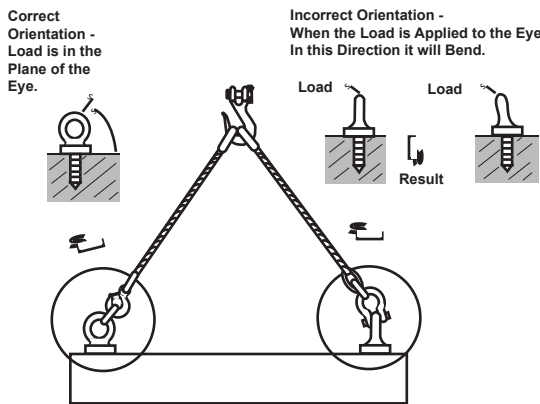


Diagram - 1.

1. It is important to insure proper alignment of the installed eye bolt before lifting. Referring to Diagram - 1 an eye bolt can be turned ¼ turn to insure proper lifting angles. Never pull across the flats of an eye bolt.
2. Diagram - 2 makes reference to the working load for shoulder pattern eye bolts. Machinery Lifting Eye Bolts in this catalog, and others catalogs to which you may refer, could show higher a Working Load Limit (WLL), or Rated Capacity (RC). Lifting Eye Bolts have a safety factor of five times the WLL/RC with proper seating and full thread engagement.
3. The RC of an eye bolt is determined from a straight, zero degree, lift. As Diagram - 2 refers, a significant reduction in capacity is experienced any time a lift changes for zero degrees. Although the ANSI design specification denotes a working load capability for a 90 degree lift, we do not recommend using a lifting angle beyond 45 degrees. When the angle of a lift is beyond 45 degrees we recommend using a Swivel Hoist Ring.

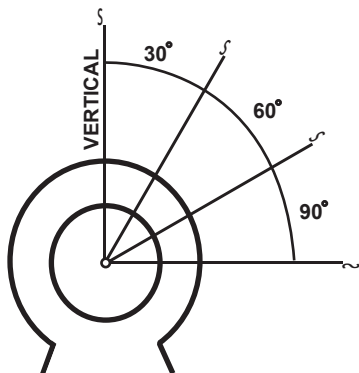


Diagram - 2. Safe Working Load for Carbon Steel Shouldered Eyebolts (ANSI/ASME B18.15).

4. Rated Capacities throughout this catalog assume a working temperature range between 30 degrees and 275 degrees Fahrenheit (-1 to 135 C), any use outside of these temperatures may not provide the same performance as listed.
5. Always insure the RC of complimenting lifting components are in line with your lift requirements. Shackles, chain, eye bolts, pulleys and hooks must be of the proper WLL or RC for the lift.
6. All hardware items should be inspected after each use. Lifting hardware showing signs of wear, thread damage, bending, elongation or defects of any kind should be replaced. To avoid the possibility of reusing defective hardware defective items should be destroyed by cutting through the connecting area (IE: Eye bolt: Cut through the eye portion. Shackle: Cut through the side.)

| Nominal Size (in.) | Inside Diameter of eye (in.) | Safe Working Load per Shouldered Eyebolt (lb.) | | | |
|--------------------|------------------------------|--|--------------------------|--------------------------|--------------------------|
| | | Vertical | 30 percent from vertical | 60 percent from vertical | 90 percent from vertical |
| 1/4 | 0.69 | 400 | 75 | NR* | NR* |
| 3/8 | 0.94 | 1000 | 400 | 220 | 180 |
| 1/2 | 1.12 | 1840 | 850 | 520 | 440 |
| 5/8 | 1.31 | 2940 | 1410 | 890 | 740 |
| 3/4 | 1.44 | 4340 | 2230 | 1310 | 1140 |
| 1 | 1.69 | 7880 | 3850 | 2630 | 2320 |
| 1 1/4 | 2.12 | 12600 | 6200 | 4125 | 3690 |
| 1 1/2 | 2.44 | 18260 | 9010 | 6040 | 5460 |
| 2 | 3.06 | 32500 | 15970 | 10910 | 9740 |

*NR means not recommended.

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