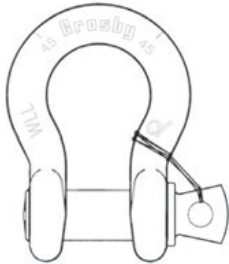




**RIGGING PRACTICE SHACKLES**

Screw pin shall be fully engaged. If designed for a cotter pin, it shall be used and maintained. Applied load should be centered in the bow to prevent side loading. Multiple sling legs should not be applied to the pin. If side loaded, the rated load shall be reduced according to Table 1 on page 94.

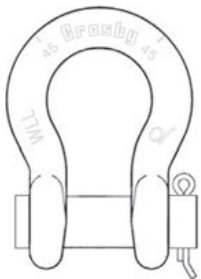
**Screw Pin Shackles Pin Security**



**MOUSE SCREW PIN WHEN USED IN LONG-TERM OR HIGH-VIBRATION APPLICATIONS.**

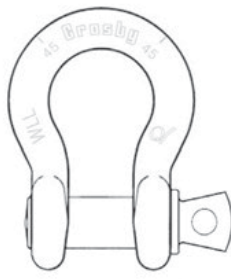
Mouse or Mousing (screw pin shackle) is a secondary securement method used to secure screw pin from rotation or loosening. Annealed iron wire is looped through hole in collar of pin and around adjacent leg of shackle body with wire ends securely twisted together.

**Shackles**



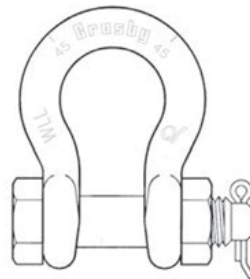
**ROUND PIN**

Do not side load, do not use as a collector ring, always use cotter pin.



**SCREW PIN**

Use when picking and placing a load, tighten pin prior to each lift.



**BOLT-TYPE**

Use in permanent or long-term installations, always use nut and cotter.

**Connection of Slings to Shackles**

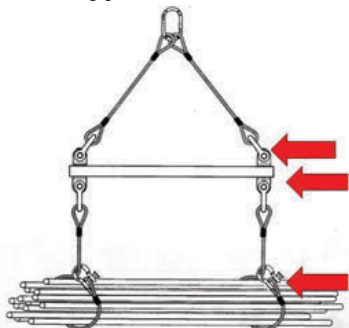


Diameter of shackle must be greater than wire rope diameter if no thimble in eye.



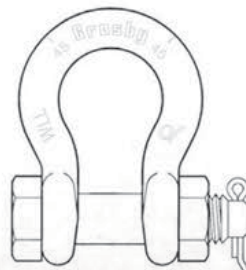
Shackle must be large enough to avoid pinching of synthetic slings.

**Bolt-Type Shackles**

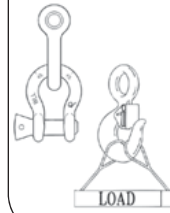


Use Bolt-Type Shackle when a permanent or long-term connection.

Use a screw pin shackle when it will be a temporary connection.



**WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS**

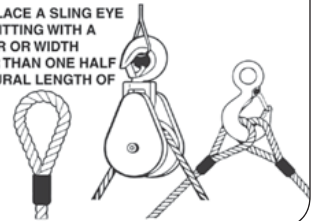


USE A THIMBLE TO PROTECT SLING AND TO INCREASE D/d

NEVER PLACE EYE OVER A FITTING SMALLER DIAMETER OR WIDTH THAN THE ROPE'S DIAMETER

**WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS**

NEVER PLACE A SLING EYE OVER A FITTING WITH A DIAMETER OR WIDTH GREATER THAN ONE HALF THE NATURAL LENGTH OF THE EYE



**SYNTHETIC SLINGS RATED LOAD**

FOLDING, BUNCHING OR PINCHING OF SYNTHETIC SLINGS, WHICH OCCURS WHEN USED WITH SHACKLES, HOOKS OR OTHER APPLICATIONS, WILL REDUCE THE RATED LOAD



BUNCHING



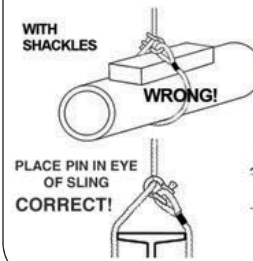
PINCHING

ASME B30.9

**CHOKER HITCH FORMED**

WITH SHACKLES

WITH CHOKER HOOK



PLACE PIN IN EYE OF SLING

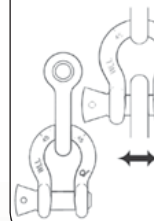
CORRECT!



**CROSBY SHACKLES POINT LOADING**

POINT LOADING OF CROSBY SHACKLE BOWS IS ACCEPTABLE

POINT LOADING OF CROSBY SHACKLE PINS IS ACCEPTABLE AS LONG AS LOAD IS REASONABLY CENTERED ON THE PIN



ALTHOUGH POINT LOADING IS ACCEPTABLE, A PAD EYE WIDTH OF 80% OR MORE OF SHACKLE SPREAD IS BEST PRACTICE