

CICA – Vic / Tas Branch Crane Safety Bulletin #283 April 2021



Greetings all. Today's Bulletin is about the safe use of web and round synthetic slings.

Synthetic slings have been a topic of several past bulletins and WorkSafe Victoria recently published a <u>safety alert on the use of soft slings</u>.

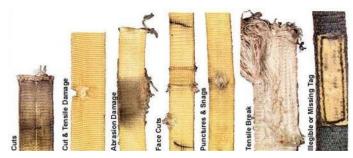
Like all tools in the rigging box arsenal, soft slings need to be used correctly to ensure lifts are completed safely.

PRE-LIFT INSPECTION

This first begins with the inspection of the sling before use. <u>Single use slings</u> are often pre-slung on a load and may not meet the minimum design factor of 8:1 called out in Australian Standards.



Slings are colour coded, but that does not mean a missing label is okay. If the label is missing, take the sling out of service. From there, visually inspect the sling for damage to the cover, end fittings, stitching, or significant colour change from UV. Finally, feel the sling for lumps or thinning areas with the outer cover.



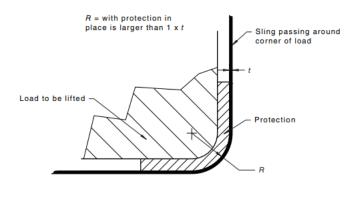
SLING THE LOAD

Besides the weight of the load, how you want to sling the load will determine the capacity requirements of the sling.

This single choked, 2 sling arrangement has a lifting capacity of 4.14 tonnes.



The white protective sleave on the sling provides edge protection. Edge protection is not only used against abrasion, but also increases the corner radius of the load putting pressure on the sling.



Where: R is the contact radius of the load to be lifted. and t is the compressed thickness of the sling.

The radius of the load (R) needs to be 3 X the thickness (t) of the sling. **H-Beam, I-Beam, and Angular** structural steel profiles DO NOT meet this requirement without additional edge protection.





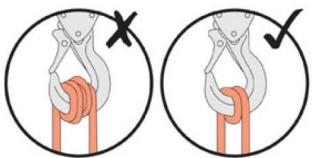
CICA – Vic / Tas Branch Crane Safety Bulletin #283 April 2021



ATTACH TO THE HOOK

Now that the slings have been selected and load secured, the arrangement at the hook needs to be considered. Consider:

- Do not crowd the hook with slings.
- <u>Do not wrap the sling around the hook more</u> <u>than once.</u>



• Attach the sling to the shackle bowl, not the pin.



RELEVANT AUSTRALIAN STANDARDS

For more information, CICA members have free access to the following standards that relate to soft slings:

- AS 1353.2-1997 Flat Synthetic-webbing slings
- AS 4497:2018 Flat Synthetic-round slings

MOBILE APPS

Rigging equipment providers, <u>Bullivants</u> and <u>Nobles</u>, have produced quick reference guides that can be accessed from your phone to assist with the selection of the right equipment and slinging arrangement. Soft Sling manufacturer, <u>SpanSet</u>, has a sling load capacity calculator.

Stay Safe - CICA