

CABLE SOCK USAGE, MAINTENANCE AND INSPECTION

This guide shows the proper usage, maintenance and inspection of cable socks to ensure safe pulling operations, maximum sock strength, and sock longevity.

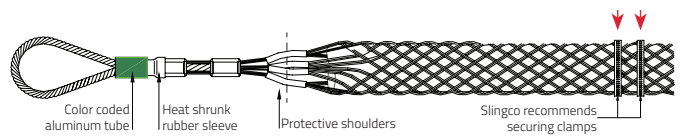


CABLE SOCK INSPECTION

Safety is our primary concern. The products that we manufacture are safety critical and must be used by competent trained personnel. It's essential to choose the right cable sock for the job.

Inspecting a cable sock is not an exact science. There are a number of variables that can weaken a cable sock that are not immediately obvious on visual inspection. This is why we work to Factors of Safety. It's important to know the difference between Working Load and Approximate Break Load, and how to use the Factor of Safety to calculate the Working Load Limit for the cable sock that will be used.

To maximise sock performance, we recommend using banding on the ends of cable socks, as shown in the figure below.



Note: Slingco recommends double banding the ends of cable socks.

WORKING LOAD LIMIT

The Working Load Limit (WLL), also known as the safe working load, is the mass that the equipment being used can safely hold, pull, or lower without breaking. In short, it's the maximum load that can safely be applied to the product when in general service.

The Approximate Break Load (ABL) is the load at which a new grip can be reasonably expected to break. This is measured on a straight line pull only, as side pulling, or angular loads, will produce different results.

The Working Load Limit (WLL) is calculated by dividing the Approximate Break Load (ABL) by the Factor of Safety (FoS). No component in the system should exceed the working load for the cable sock.

The Factor of Safety (FoS) is the 'extra' coverage of the breaking load over the expected working load. Factor of Safety is often noted as 'X to 1' or 'X:1'. The Factor of Safety accommodates normal spikes in load tension that may occur when under load.

$$WLL = \frac{ABL}{FoS}$$

Cable Sock Factor of Safety (FoS) *

- Overhead Pulling - 5 : 1
- Underground Pulling - 3 : 1
- Cable Support - 10 : 1

* General guidance only. Adhere to any existing company or industry safety guidelines if applicable.

When inspecting a cable sock, it's critical to be able to identify damage or potential trouble spots. The following are some of the types of damage you should be aware of prior to beginning a pulling project with your cable socks. If these are observed, replacement of the sock should be considered.

DAMAGED PULLING EYE



The eye of the cable sock is very important. If any damage is found, replace the sock immediately. Causes of eye damage include:

- Pulling loads at an angle as opposed to straight line pulling
- Misuse and wear from excessive use

FRAYED WIRES



Frayed wires cause the cable sock to weaken significantly. The more that wires are damaged, the weaker the sock. Causes of fraying are:

- Excessive abrasion while cable is being pulled
- Becoming stuck or snagging during a pulling operation

RUSTED WIRE



Rust will weaken the strands of wire that make up the cable sock. If excessive rust is identified, replace the sock. Causes of rust are:

- Socks left in moist conditions or stored damp after water exposure
- Water with high salinity content will cause rusting more rapidly

BENT & BROKEN WIRES



Bent and broken wires have the same effect as fraying and cause the cable sock to weaken significantly. Causes of this type of damage are :

- Excessive abrasion while the cable is being pulled
- General wear and tear over time

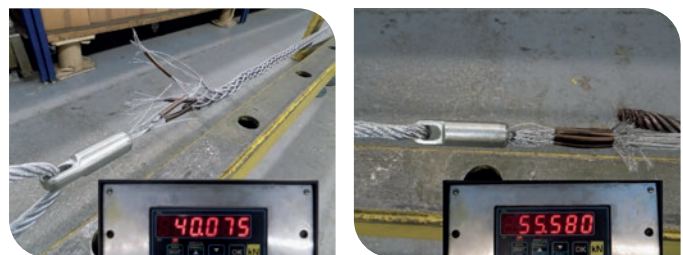
EFFECTS OF TORSIONAL BUILD UP

The most important factor when using a cable sock to pull wire is to eliminate torsion, or twisting of the cable sock assembly. It is important, when stringing high tension wires for electrical transmission and distribution, to use the proper components to eliminate torsion.

If wires are likely to develop torsion during a pull, line pulling swivels enable the torque to be released, which could otherwise cause damage to the wire or sock.

Advantages of Slingco swivels include:

- Reduced torsion strain
- Quality tested and inspected
- Available in bull-nose or rounded style
- Can be matched with Slingco heavy duty socks



IMPORTANT TECHNICAL INFORMATION



CABLE PULLING & SUPPORT SOCKS

ASSESSMENT OF SUITABILITY

There are many factors that must be taken into account when assessing the suitability of a cable sock for a proposed application, and when trying to calculate the working load limit. These include:

- Size of cable sock in relation to size/shape of gripped object
- Stability of object(s) when gripped.
- Grip surface of object(s).
- Resistive force of object(s).
- Anticipated path of movement, including possible obstructions.
- Approximate breaking strength of the cable sock.
- Condition of cable sock.
- Suitability and compatibility of any attachments used.
- Environment/operating conditions.
- Persons at risk.

If you have any questions regarding suitability for any particular application, please call the distributor who supplied the cable sock, or our in-house Technical Department.

Please note: Slingco cable socks must be double steel banded securely before being pulled.

CABLE SOCK SAFETY INFORMATION

- Ensure that the cable sock mesh fits the cable correctly.
- Ensure that the cable fits up to the mid-point of the protective shoulder.
- Clamp the ends of the cable sock when attaching the cable. We recommend between 30 mm and 60 mm from the end of the cable sock. **SECURE CLAMPING MUST BE USED ON SLINGCO CABLE SOCKS.**
- Never modify or attempt to repair any cable sock.
- Ensure proper maintenance of the cable sock. If in doubt, call +61 3 8840 6556.
- Check the condition of the cable sock, and that it is the correct size for the intended application - do not exceed the rated capacity.
- Cable socks that are worn, bent, or otherwise damaged should not be used.
- Cable socks are only to be used for temporary installations.
- Pulling devices should only be attached via the pulling eye.
- Cable socks must only be fitted and used by trained competent person(s).



SLINGCO CABLE SOCKS MUST NOT BE USED TO THEIR APPROXIMATE BREAKING STRENGTH. A SENSIBLE SAFETY FACTOR MUST ALWAYS BE USED. IF IN DOUBT CONTACT THE MANUFACTURER OR DISTRIBUTOR THAT SUPPLIED THE CABLE SOCK.



Slingco Australia Pty. Ltd.

L9, 1 York Street,
Sydney, NSW 2000, Australia
Sales: +61 3 8840 6556
sales@slingcoaustralia.com.au

+61 3 8840 6556

slingcoaustralia.com.au

Cable Sock Inspection and Safety Guide: MAN13550 – RevA Date March 2024

Slingco makes no warranty, express or implied, with respect to this product nor with respect to its specifications. In no event shall Slingco be liable for any direct, indirect, punitive, incidental, special consequential damages to property or life, whatsoever, arising out of or connected with the use or misuse of this product. This product is intended for use by qualified professionals having adequate knowledge of its proper use. *March 2024 - v1.4*