slingco®

CABLE GRIP INSPECTION AND MAINTENANCE

HOW TO ENSURE SAFE AND RELIABLE CABLE GRIP PERFORMANCE

This guide shows the proper usage, maintenance, and inspection of cable grips to ensure you achieve safe pulling operations, maximum grips strength, and grip longevity.

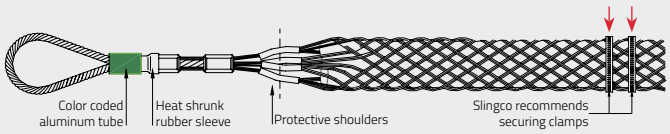
CABLE GRIP INSPECTION

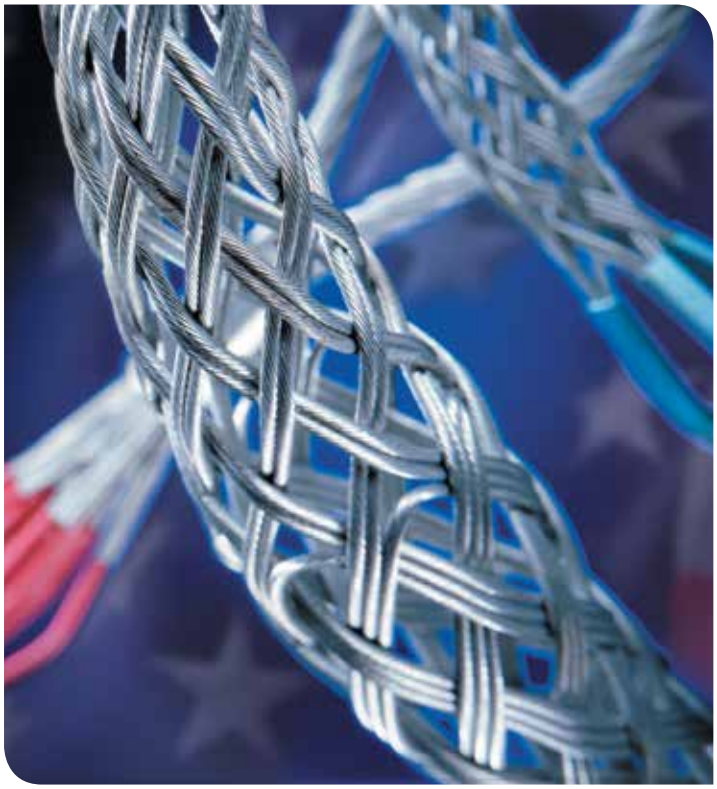
Safety is our primary concern. The products that we manufacture are safety critical and must be used by competent trained personnel. It is essential to choose the right cable grip for the job.

Inspecting a cable grip is not an exact science. There are a number of variables that can weaken a cable grip that are not immediately obvious on visual inspection. This is why we work to Factors of Safety. It is 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 grip that will be utilized.

To maximize grip performance, we highly recommend utilizing banding on the ends of cable grips, as shown in the figure below.

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





WLL = ABL ÷ FoS

Cable Grip Factor of Safety (FoS) *

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

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

WORKING LOAD LIMIT

The Working Load Limit (WLL), sometimes also known as the safety 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 be applied to the product safely 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 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 grip.

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

When you are inspecting a cable grip, it is 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 grips. If these are observed, replacement of grip should be considered.

DAMAGED PULLING EYE


The eye of the cable grip is very important. If any damage is found, replace grip 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 grip to weaken significantly. The more wires damaged, the weaker the grip. 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 grip. If excessive rust is identified, replace grip. Causes of rust are:

- Grips 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 grip to weaken significantly. Causes of this type of damage are :

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

EFFECTS OF TORSIONAL BUILD UP

The most important factor when using a cable grip to pull wire is to eliminate torsion, or twisting of the cable grip 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 otherwise could cause damage to the wire or grip.

Advantages of Slingco Swivels include:

- Reduce torsion strain
- Are quality tested and inspected
- Come in bull-nose or rounded style
- Can be matched-up with Slingco's heavy duty grips

CABLE PULLING & SUPPORT GRIPS

ASSESSMENT OF SUITABILITY

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

- Size of cable grip 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 grip
- Condition of cable grip
- 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 teh distributor who supplied the cable grip, or our in-house Technical Department.

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

CABLE GRIP SAFETY INFORMATION

- Ensure that the cable grip 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 grip when attaching the cable. We recommend between 1.25" and 2.25" from the end of the cable grip. SECURE CLAMPING MUST BE USED ON SLINGCO CABLE GRIPS
- Never modify or attempt to repair any cable grip
- Ensure proper maintenance of the cable grip. If in doubt, call 888-685-9478
- Check the condition of the cable grip, and that it is the correct size for the intended application - do not exceed the rated capacity
- Cable grips that are worn, bent, or otherwise damaged should not be used
- Cable grips are only to be used for temporary installations
- Pulling devices should only be attached via the pulling eye
- Cable grips must only be fitted and used by trained competent person(s)

SLINGCO CABLE GRIPS 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 GRIP.

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