

Instructions for the safe use of wire rope grips to EN13411-5 (DIN1142)



Using wire rope grips safely

This document outlines the safe use of wire rope grips to EN 13411-5 (DIN1142) and should be passed to the user of the equipment. The form covers best practice use only and may not cover all aspects of a more specialised application.

Additional advice on storage, handling, installation, inspection and discard is available on request.

ALWAYS:

- Inspect the wire rope for damage, wear, corrosion or abuse at the start of each work period.
- Ensure that the rope diameter corresponds to the size of the grip.
- Test the assembly with a load of equal or greater weight than loads expected in use.
- Check and retighten nuts to recommended torque.
- Ensure the clips are kept clean, dry and free of lubrication & not subjected to extremes of temperature.

NEVER:

- Use wire rope grips at extremes of temperature without consulting the supplier.
- Use wire rope grips as the main termination for overhead lifting.
- Use the grips with PVC or nylon-coated cable for any lifting applications unless coating is removed.
- Use wire rope grips with obvious signs of mechanical, corrosive or heat damage.
- Use wire ropes that are excessively worn, damaged or corroded.

**** Warning: Failure to use the clips correctly may result in death or serious injury ****

In-service inspection and maintenance

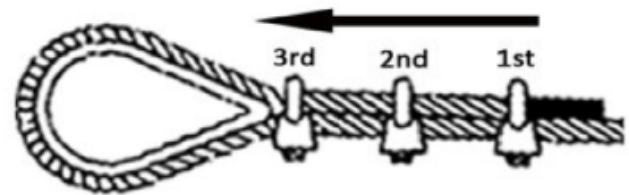
Regular periodic inspection of wire rope grips and the keeping of records, authenticated by a competent person is a requirement for almost every load-bearing application using wire rope grips. The frequency of this activity is dependent on the severity of the application and governing regulations.

Useful recommendations may be found in published standards (e.g. BS 6570) and in suppliers' literature.

Fitting

Mark the position of the grips on the cable prior to fitting. Grips must be placed so that they are separated by at least one clear grip length apart (a distance of six times rope diameter is suggested).

Select the correct number of grips for each termination as indicated in the table below. The first grip should be fitted furthest from the eye leaving a tail of approximately one grip width long. The 'U' bolt must always be placed against the dead end of the rope (non "load" bearing end) with the saddle part of the grip supporting the load bearing or live section of the wire rope. Remember this tip: "never saddle a dead horse".



Subsequent grips should be secured in the direction of the eye as indicated on the diagram below. Secure the thimble into the eye before fitting the last grip.

Use a torque wrench to tighten evenly. Alternate from one nut to the other until the recommended torque is reached. If a pulley (Sheave) is used in place of a thimble, add one additional dip.

Recommended number of wire rope grips & torque for each termination:

Rope & Grip Nominal Diameters (mm)	Minimum number of wire rope grips to attain 85% of rope minimum breaking load	Required tightening torque to attain required efficiency Nm
5	3	2.0
6.5	3	3.5
8	4	6.0
10	4	9.0
13	4	33.0
16	4	49.0
19	4	68.0
22	5	107
26	5	147
30	6	212
34	6	296
40	6	363

Note - For intermediate nominal diameters of rope, the next largest grip size should be used - i.e. - a 9mm cable should be supported by an 10mm grip.

If in doubt, please contact us:

T: +44 (0) 1278 773510

Email: sales@tecni.uk

Web: <https://www.tecni.uk>