



Installation guidelines for cables in drag chains

FELTEN Wire & Cable Solutions

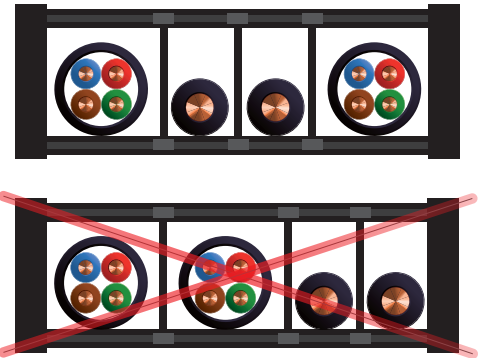
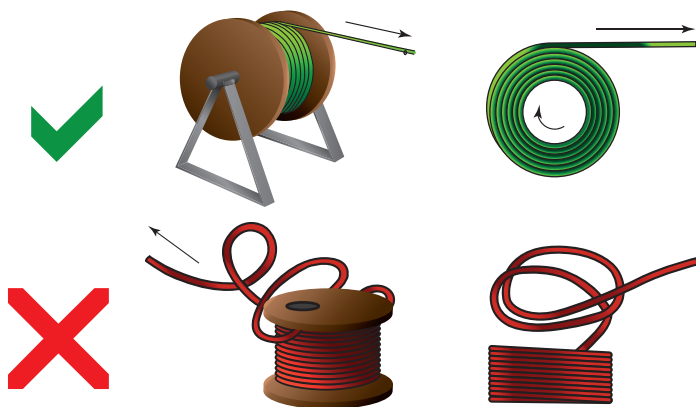
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The choice of drag chains and electric cables should not only be based on the mathematical Calculation different factors like dynamic parameters, temperature range and environmental influences should be considered.

These components should be selected carefully in accordance with the manufacturers technical documentation.

The following information is only provided as an installation guideline for cables in drag chains.

When cutting the cables for installation in the drag chain, remove the cable from the coil tangentially and not in loops. Unwind the cable from the drum without twisting it. Before installation the cables must be laid out in a straight and non-twisted form on a plane surface.



The strain relief for the cables depends on the length and speed of the drag chain and type of installation. Generally, it has to be ensured that the clamping force is applied on the largest possible area of the outer jacket so that the cables are not crushed while also preventing displacement of the cables.

Preferably the cables should be equipped with a strain relief on the driver and on the fixed point. Especially at the driver side, because that's where pull and push forces are most present. For short travel lengths, low travel speed and smaller cable diameters the use of strain relief combs and cable ties is often sufficient.

Respect the permissible temperature range at any point during installation. Temperature ranges are given in each individual datasheet of the cables.

To guarantee that the drag chain works properly and avoid any damage to the cables internals, certain criteria concerning the installation of the cables must be followed.

1. Cables have to be able to move freely in the drag chain and must not be attached or tied together.
2. For cables a clearance of at least 10% of its diameter has to be guaranteed.
3. Avoid placing cables with different sheath materials next to each other to minimize friction.
4. In applications with multiple cables it's preferable to avoid them from rubbing against each other by using separators.
5. Cables with significant different diameters should not be placed next to or on top of each other without separators. If this is unavoidable, ensure that the remaining clearance height is smaller than the smallest cable diameter. This is the only way to prevent the cables from becoming tangled.
6. Cables should be placed in a way that they don't push against the outer radius or pull against the inner radius.
7. Place the cables in a symmetrical way according to their dimensions and weight placing the largest and heaviest towards the outside and the smaller and lighter in the center. Spreading the load evenly can help the drag chain achieve its maximum service life.

