



Energy and control cables in drag chains are exposed to extremely high mechanical stress. To achieve the maximum of live time (number of bending cycles) the following rules have to be considered:

- 1.** Cables must be put into the chain system without twist. This is possible only by tangential pay-off from drums/ coils. Pulling the cable from a lying drum or out of the center of a coil inevitably causes torsion. It is recommended to unreel the cable before assembly and to relax it.
- 2.** Distribution of weight within the chain should be as symmetrical as possible. Heavy cables should be arranged in the outer lanes, lightweight ones in the center.
- 3.** The cables have to be arranged loosely next to each other in the chain stays. As far as possible they should be arranged individually, separately from each other by spaces or in separate holders in the neutral zone of the chain. A free space of 10% of the cable diameter should be considered. Within the stays cables must not be fixed.
- 4.** The connection of the cables should be made at both ends of the chains. Clamping area should be as large as possible, the core insulation must not be crushed.
- 5.** The bending radii for permanently moved application according to the data-sheets must be considered strictly.
- 6.** Cables with more than 25 cores (multi-layer stranding) preferably should not be used. Alternative several cables have to be used.
- 7.** Never adjust cables with the help of the printing on the outer sheath, it could be helically printed by production reasons!
- 8.** It has to be ensured that the cables can move absolutely free in the radius of curvature, i.e. their movement should not be forced by the guide, so that relative movement of the cables with respect to each other and to the guide is possible. It is a good idea to check the position of the cable after a short period of operation.