

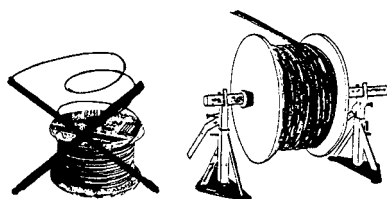
ÖLFLEX-FD® and UNITRONIC-FD® Cables in Power Chain Systems

1. The choice of the power chain system (also cable track system) must be made in accordance with the needs of the required cables.

Note: It is very recommendable not to make use of cables with multi-layer construction if possible, e.g. > 25 cores, but to assign the necessary cores to a higher number of cables.

2. The minimum permissible bending radii of the cables must be strictly adhered to (please, find further appropriate information in the Technical Data of our Catalogue under bending radius for flexible use).
3. The cables must be laid out without twisting into the power chain system. Therefore, please, never pull off one cable end overhead from drums and coils which rest on their sides, but unroll the cables from the drum or the coil and lay them out or suspend them, if necessary. For the use in power chain systems, we recommend only to withdraw cables directly from drums standing or hanging vertically.

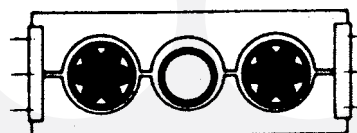
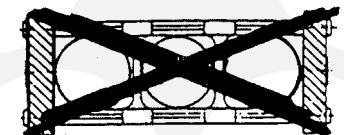
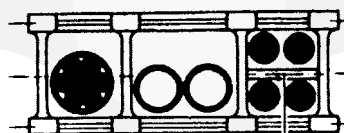
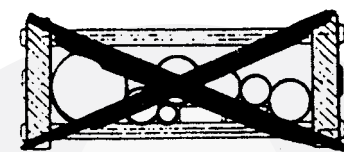
Warning: Along the cables, the imprints run gently spirally around their surfaces, conditionally of manufacturing. Therefore, the printing cannot be used as an indicator of the twist-free straightening of the cables. When the cables are drawn in, the chains should be laid out longitudinally. Afterwards, the power chains loaded with cables can be brought into operating position.



4. The cables must lie loosely next to each other in the chain stays. As far as possible they should be arranged individually, disjoined via separators and placed within individual holders in the neutral zone of the chain. The free

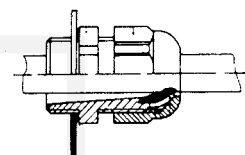
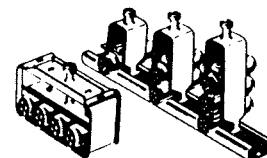
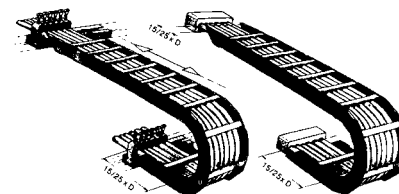
space for the cables in the chain stay should be at least 10 per cent of the cable diameter. Arranging cables one above the other without using separators should be avoided.

Note: In case of a vertically suspended chain arrangement more free space must be provided regarding the height of the chain stay, because the cables are extended during operation. After a short period of operation, the length adjustment of the cables must be checked and, if necessary, corrected.



5. The cables **must not be fixed or tied together** in the chain.

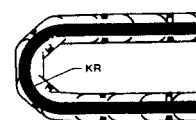
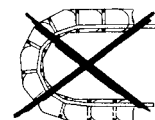
6. The cables should be connected at both ends of the chain. In the case of long power chains with top trunks lying on and rubbing against bottom trunks, the cables may only be connected at the driven. The bending of the cables must not include their connection points. The distance between the end point of the bending movement and the connection point should be as large as possible (in the case of ÖLFLEX® SERVO FD 750 P, -760 CP and UNITRONIC® FD minimum 20 times the cable diameter. In the case of ÖLFLEX® FD CLASSIC, ÖLFLEX® FD, ÖLFLEX® SERVO FD 755 P -795 P and ÖLFLEX® FD ROBUST minimum 10 times the cable diameter).



SKINTOP® cable glands to be tightened by hand only (without using a tool). **Avoid bruising of the cables.**

7. Please, make sure, that the cables can move absolutely freely in the bending section of the power chain. Compulsory guide of the cables via the power chain must be excluded, so that relative movement of the cables with respect to each other and to the guide is possible. It is recommendable to check the position of the cable after a brief period of operation. This inspection must take place after thrust and tension movement.

8. If a power chain breaks, the cables must also be replaced, because damage due to excessive stretching cannot be ruled out.



9. In case your horizontally installed power chain will be long enough to have the top trunk gliding on top of the bottom trunk it is very important to allocate the cables within the chain in a way that horizontally symmetric distribution of the total weight of the cables is guaranteed. Only by respecting this rule, it is assured, that the top trunk will not cant in the bottom trunk through torsion of the top trunk as a consequence of one-sided weight distribution inside of it. Disregarding of this advice dramatically reduces cycle life of the power chain system.