Assembly and Maintenance Instructions

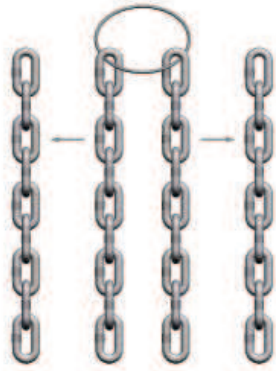
Instructions and Questionnaire

Assembly of the drive and tail wheels

Pay attention to maintaining the correct chain center distance; Drive, guide and tail shafts must be installed parallel and all the wheels must be in line.

Recommended assembly of the chain lengths

- Connect individual chain lengths with connecting links
- Install the connected chain lengths into the conveyor trough
- Connect into an endless loop
- Assemble the flight attachments and flight bars
- Tension the assembled system



The chain lengths are supplied bundled in pairs. In order to avoid mixing up of the chain lengths, the wire for the bundling should only be opened in the course of the assembly; the chain lengths must be assembled in the conveyor lying parallel, this is the only way to guarantee that chain loops will be of the same length; if the chain lengths are mixed before installation the final links of every chain lengths are marked with the chain length number and are colour coded.

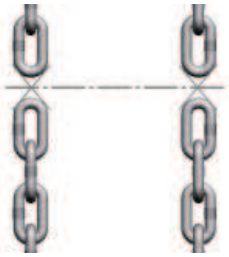
It is possible to get the chain lengths perfectly matched with the chain length numbers resp. the colour marking; during the assembly of the chain lengths please take care that the welds of the vertikal chain links point to the wheel center. The position of the other links can be as required.

Pay attention that the chain couplings are installed in the correct position

Chain couplings KHV can only be mounted as vertical chain links for all conveyors and chain systems.

Connecting links VHV are mounted as vertical or horizontal chain links and the locking lash with the marking must point outwards but only as horizontal chain links with horizontal and additional inclined conveying sections with sprockets.

Shortening of the chain may be necessary to shorten the chain in order to obtain the exact required chain length of the make – up lengths, or if the chain lengthens due to wear. If chain shortening is necessary an even number of chain links (2, 4, 6, and so on) must be cut out from both chain loops. Links must be cut out with a cutting disc or a burner. Pay attention not damage or overheat the neighboring links.



The pitch circle dia. of the sprocket RHV is adapted with shimplates to the individual teeth. Shimplates and new teeth can be installed without disassembly the chain. The thickness of the shimplates can only be determined by measuring the chain lengthened due to wear. As soon as the case hardened layer is worn off the wear will increase rapidly. Chains and sprocket teeth will wear out under normal operating condition at the same time.

Shimplates should be fitted when the chain is lengthened due to wear by apprx. 2,5%. The replacement of the chain is recommended with the quality grade E10 by a chain wear of apprx. 3,5% and quality grade E14 by 5%.

Pay attention to a uniform charging over the full trough width of the conveyor. Both chain loops must be equally loaded due to conveying material and chain tractive forces. Asymetric loading on the chain loops lead sooner or later of an increase in pitch due to wear and to slanting flight bars.

The conveying speed should be adjusted to the conveying capacity so that a maximum loading of the flight bars is achieved.

The chain tension must be checked regularly, especially during commissioning of new chains to check the elongation of the chain due to wear.

Basically, the chain tension should only be as high as necessary for trouble-free operation. Both chain loops must be equally tensioned. Excessive tension will increase the chain wear rate and will reduce the chain life.

Thread size	Nm	Lbf/ft.
M 6	10	7
M 8	25	18
M 10	49	35
M 12	85	62
M 14	135	98
M 16	210	152
M 18	300	217
M 20	425	307
M 22	580	420
M 24	730	528
M 27	1.100	796
M 30	1.450	1.049
M 33	1.900	1.136
M 36	2.450	1.772

Tightening torque Nm and Lbf/ft for bolts and hex. nuts strength class 8.8 and 8, Overall Friction Coefficient of $\mu = 0.14$

Conveyors designed with long sections of unsupported round steel chains require very high pre-tensioning loads. This can be avoided by supporting the chain with guide rails.

Densely packed material may cause the chain to disengaging from sprockets or idler rollers. To prevent this strong rigid chain guide assemblies should be located before, after and around the contact points of changes in chain travel.