

Mast Chains

Leaf Chains comprise several functions and are regulated by ANSI. They are designed for low-speed pulling, for tension linkage and forklift masts, and as balancers between counterweight and head in several machine tools. Leaf chains are at times even called Balance Chains.

Construction and Features

Leaf chains are actually steel chains using a simple link plate and pin construction. The chain number refers to the lacing of the links and the pitch. The chains have specific features such as high tensile strength for every section area, which enables the design of smaller mechanisms. There are B- and A+ type chains in this series and both the AL6 and BL6 Series have the same pitch as RS60. Lastly, these chains cannot be powered utilizing sprockets.

Handling and Selection

Comparably, in roller chains, all of the link plates have higher fatigue resistance due to the compressive stress of press fits, whereas in leaf chains, only two outer plates are press fit. The tensile strength of leaf chains is high and the most acceptable tension is low. Whenever handling leaf chains it is important to check with the manufacturer's handbook so as to guarantee the safety factor is outlined and utilize safety guards always. It is a good idea to carry out extreme care and utilize extra safety measures in applications where the consequences of chain failure are serious.

Utilizing much more plates in the lacing leads to the higher tensile strength. For the reason that this does not enhance the utmost allowable tension directly, the number of plates utilized can be restricted. The chains need regular lubrication since the pins link directly on the plates, producing an extremely high bearing pressure. Utilizing a SAE 30 or 40 machine oil is normally suggested for nearly all applications. If the chain is cycled over 1000 times day after day or if the chain speed is more than 30m for each minute, it will wear very rapidly, even with continual lubrication. Thus, in either of these conditions using RS Roller Chains will be more suitable.

AL type chains are only to be used under particular conditions like for example where there are no shock loads or when wear is not a huge issue. Make certain that the number of cycles does not go over one hundred daily. The BL-type will be better suited under different conditions.

If a chain with a lower safety factor is chosen then the stress load in components would become higher. If chains are utilized with corrosive elements, then they could become fatigued and break quite easily. Performing regular maintenance is vital if operating under these kinds of conditions.

The outer link or inner link type of end link on the chain would determine the shape of the clevis. Clevis connectors or Clevis pins are constructed by manufacturers, but the user typically supplies the clevis. A wrongly constructed clevis could reduce the working life of the chain. The strands should be finished to length by the manufacturer. Check the ANSI standard or call the producer.