

Mast Chain

Mast Chains - Leaf Chains have several functions and are regulated by ANSI. They are designed for tension linkage, lift truck masts and for low-speed pulling, and as balancers between counterweight and head in several machine devices. Leaf chains are sometimes also called Balance Chains.

Construction and Features

Constructed of a simple link plate and pin construction, steel leaf chains is identified by a number that refers to the lacing of the links and the pitch. The chains have certain features such as high tensile strength for every section area, that allows the design of smaller mechanisms. There are A- and B- kind chains in this series and both the AL6 and BL6 Series comprise the same pitch as RS60. Lastly, these chains cannot be driven with sprockets.

Selection and Handling

Comparably, in roller chains, all of the link plates have higher fatigue resistance due to the compressive stress of press fits, while in leaf chains, only two outer plates are press fit. The tensile strength of leaf chains is high and the maximum acceptable tension is low. When handling leaf chains it is essential to consult the manufacturer's manual to be able to ensure the safety factor is outlined and use safety guards at all times. It is a good idea to exercise extreme care and use extra safety measures in applications where the consequences of chain failure are serious.

Using much more plates in the lacing results in the higher tensile strength. Since this does not improve the most acceptable tension directly, the number of plates used could be restricted. The chains need frequent lubrication since the pins link directly on the plates, producing a really high bearing pressure. Making use of a SAE 30 or 40 machine oil is often suggested for nearly all applications. If the chain is cycled more than 1000 times day after day or if the chain speed is more than 30m per minute, it would wear very rapidly, even with continual lubrication. Hence, in either of these conditions using RS Roller Chains will be more suitable.

The AL-type of chains must just be used under certain conditions like for instance if wear is not a huge problem, when there are no shock loads, the number of cycles does not go over one hundred day by day. The BL-type will be better suited under other situations.

If a chain utilizing a lower safety factor is selected then the stress load in components will become higher. If chains are used with corrosive elements, then they could become fatigued and break rather easily. Doing frequent maintenance is vital when operating under these types of situations.

The type of end link of the chain, whether it is an inner link or outer link, determines the shape of the clevis. Clevis connectors or likewise called Clevis pins are made by manufacturers but usually, the user supplies the clevis. An improperly constructed clevis can reduce the working life of the chain. The strands must be finished to length by the manufacturer. Check the ANSI standard or call the maker.