

Mast Chains

Mast Chains - Leaf Chains comprise various applications and are regulated by ANSI. They are meant for tension linkage, forklift masts and for low-speed pulling, and as balancers between counterweight and head in certain machine gadgets. Leaf chains are sometimes also called Balance Chains.

Features and Construction

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

Selection and Handling

In roller chains, the link plates have a higher fatigue resistance because of the compressive stress of press fits, yet the leaf chain only has two outer press fit plates. On the leaf chain, the most allowable tension is low and the tensile strength is high. Whenever handling leaf chains it is important to confer with the manufacturer's handbook to be able to guarantee the safety factor is outlined and utilize 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 severe.

Higher tensile strength is a direct correlation to the utilization of much more plates. As the use of more plates does not improve the maximum allowable tension directly, the number of plates can be limited. The chains need regular lubrication in view of the fact that the pins link directly on the plates, producing an extremely high bearing pressure. Making use of a SAE 30 or 40 machine oil is frequently 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 really fast, even with constant lubrication. Thus, in either of these conditions using RS Roller Chains would be much more suitable.

The AL-type of chains should just be used under certain situations like for example when wear is really not a huge problem, if there are no shock loads, the number of cycles does not go over a hundred day by day. The BL-type would be better suited under different situations.

If a chain using a lower safety factor is chosen then the stress load in parts will become higher. If chains are utilized with corrosive elements, then they can become fatigued and break quite easily. Doing frequent maintenance is really important when operating under these types of situations.

The type of end link of the chain, whether it is an outer link or inner link, determines the shape of the clevis. Clevis connectors or Clevis pins are made by manufacturers but often, the user provides the clevis. An improperly constructed clevis could reduce the working life of the chain. The strands should be finished to length by the manufacturer. Refer to the ANSI standard or get in touch with the manufacturer.