

Mast Chain

Mast Chains - Used in different applications, leaf chains are regulated by ANSI. They could be used for forklift masts, as balancers between counterweight and heads in some machine devices, and for low-speed pulling and tension linkage. Leaf chains are occasionally even referred to as Balance Chains.

Features and Construction

Leaf chains are actually steel chains with a simple link plate and pin construction. The chain number refers to the lacing of the links and the pitch. The chains have particular features like high tensile strength for every section area, which allows the design of smaller devices. There are A- and B- type chains in this particular series and both the BL6 and AL6 Series contain the same pitch as RS60. Finally, these chains cannot be driven with sprockets.

Handling and Selection

In roller chains, the link plates maintain a higher fatigue resistance due to the compressive stress of press fits, yet the leaf chain just contains two outer press fit plates. On the leaf chain, the maximum acceptable tension is low and the tensile strength is high. Whenever handling leaf chains it is important to check with the manufacturer's guidebook in order to ensure the safety factor is outlined and utilize safety measures all the time. It is a good idea to exercise utmost caution and use extra safety measures in functions wherein the consequences of chain failure are serious.

Utilizing more plates in the lacing leads to the higher tensile strength. Since this does not improve the maximum allowable tension directly, the number of plates used may be limited. The chains require regular lubrication for the reason that the pins link directly on the plates, generating a very high bearing pressure. Using a SAE 30 or 40 machine oil is often advised for the majority of applications. If the chain is cycled more than 1000 times day by day or if the chain speed is over 30m per minute, it will wear really fast, even with constant lubrication. Therefore, in either of these conditions the use of RS Roller Chains would be much more suitable.

The AL-type of chains must only be used under certain situations like for example when wear is really not a huge issue, when there are no shock loads, the number of cycles does not go beyond 100 on a daily basis. The BL-type would be better suited under various situations.

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

The inner link or outer link type of end link on the chain would determine the shape of the clevis. Clevis connectors or otherwise known as Clevis pins are constructed by manufacturers, but the user normally provides the clevis. An improperly made clevis can reduce the working life of the chain. The strands should be finished to length by the maker. Refer to the ANSI standard or contact the maker.