

## Mast Chains

Leaf Chains have several applications and are regulated by ANSI. They are designed for lift truck masts, for low-speed pulling and tension linkage, and as balancers between head and counterweight in several machine tools. Leaf chains are occasionally even known as 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 particular features like high tensile strength per section area, which allows the design of smaller devices. There are A- and B- type chains in this particular series and both the AL6 and BL6 Series contain the same pitch as RS60. Finally, these chains cannot be driven utilizing sprockets.

### Selection and Handling

Comparably, in roller chains, all of the link plates maintain higher fatigue resistance due to the compressive stress of press fits, whereas in leaf chains, just two outer plates are press fit. The tensile strength of leaf chains is high and the most allowable tension is low. While handling leaf chains it is important to confer with the manufacturer's instruction booklet to be able to guarantee the safety factor is outlined and use safety measures always. It is a great idea to exercise extreme caution and utilize extra safety guards in applications where the consequences of chain failure are severe.

Using more plates in the lacing causes the higher tensile strength. Because this does not improve the maximum acceptable tension directly, the number of plates used could be limited. The chains require frequent lubrication in view of the fact that the pins link directly on the plates, generating an extremely high bearing pressure. Utilizing a SAE 30 or 40 machine oil is normally suggested for most applications. If the chain is cycled over 1000 times in a day or if the chain speed is more than 30m for each minute, it would wear really quick, even with continuous lubrication. Thus, in either of these situations utilizing RS Roller Chains would be more suitable.

AL type chains are only to be used under certain conditions such as where there are no shock loads or when wear is not a huge concern. Be certain that the number of cycles does not go over 100 day after day. The BL-type will be better suited under other conditions.

If a chain utilizing a lower safety factor is chosen then the stress load in parts will become higher. If chains are utilized with corrosive elements, then they may become fatigued and break rather easily. Performing regular maintenance is really important if operating under these types of situations.

The kind of end link of the chain, whether it is an outer link or inner link, determines the shape of the clevis. Clevis connectors or also called Clevis pins are made by manufacturers but usually, the user supplies the clevis. A wrongly made clevis could decrease the working life of the chain. The strands must be finished to length by the manufacturer. Refer to the ANSI standard or contact the maker.