WHAT IS THE "SECRET" OF THE CHAIN SPROCKET?

In the case of the self-adjusting chain sprocket the forces will be distributed evenly across all engaged teeth.
This leads to a reduction of the load placed on the individual tooth and, consequently, also the chain. The reason for this is the self-adjusting chain sprocket which - unlike any conventional chain sprocket - consists of individual elements with every single element representing a tooth. Pins account for the flexible alignment of all teeth. Both ends of a tooth element feature cavities, each of them holding a Connex-made elastic round spring in conjunction with the neighboring elements.

The tooth elements aligned in this manner form a radial and stable toothed wheel rim with intrinsically flexible tooth elements which are able to make small tilting movements and transmit these to the neighboring teeth. If now there is a force acting on any of the teeth, the flexible arrangement provokes the generation of a torque that is transmitted by means of the round springs to the following teeth, and, thus, also down to the first load-bearing tooth element. Thus, all teeth will be involved in the distribution of the force.

This "cunning" idea of the flexible tooth elements involves even more positive aspects. The patented chain sprocket is able to compensate chain and sprocket pitch deviations caused, for instance, by wear, chain elongation and/or production tolerances. Apart from that break-in shocks are cushioned by the round springs. If it should become necessary to replace individual teeth of the new chain sprocket, no dismounting of the sprocket will be necessary and the chain can also stay in place; this will save both time and costs.

Speaking of the costs:

At first, the production costs for this chain sprocket were expected to be higher than for conventional chain sprockets. This, however, has turned out to be INCORRECT. On the contrary, this self-adjusting chain sprocket is comparable to conventional chain sprockets as far as prices are concerned. It has, however, the tremendous advantage that you can assume the chain to have a considerably longer operational life span due to the reduced wear and tear and this will have enormous cost-saving effects. Additional cost-saving can be achieved by simply turning around any teeth showing signs of wear and tear. So far, the entire chain sprocket had to be changed.