

Finding a better solution with SKF

By Bernd Müsing & SKF

For some time now we see more and more integrated BB-crank-solutions. While this surely solves many problems with the Octalink we find it has some **serious downturns**:

1. The alignment of the bearings depends largely on the precision of the BB-shell. The "normal" small misalignments result in high stress and so a short life of the bearings.
2. Due to limitations in space and weight those bearings content relatively small balls. Sometimes even smaller than in many "regular" BB-cassettes. As the size of the balls is the most important factor for their load capacity, this seems to be a serious loss. Roller bearings have a much higher strength than similar sized balls, but can not be used in this design.
3. Because of the 3-piece shell and the narrow space behind the crank arms, sealing those bearings poses serious difficulties. Water and dirt might enter the BB through the frame as well as from the outside, when under pressure.

Over the past 2 years the interest in ISIS-drive solutions is declining slowly. While the cranks and the ISIS-connection offer a very good performance, the BB-sets became the source of a lot of trouble, particularly because of their often extremely short lifetime.

Besides the difficulties in creating a proper sealing, the problems result mostly from inadequate bearing designs. When using compact bearings, the large diameter spindle and fixed outer size of the BB-shell allow only the use of thin-ring bearings with extremely small balls, which simply can not carry the high stress of Mountain Bike use.

- The new family of SKF-BB-units are the only ones that offer life-long durability for MTB's.
- Their large volume spindles offer unsurpassed strength and stiffness.
- The one-piece shells provide by far the most easy and safe assembly.
- The unique patented roller-and-ball bearing design is able to withstand all "normal" stress of hard MTB use.

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- The worldwide-patented SKF axial seal offers superior sealing, providing perfect protection against water and dirt.

While the most affordable 300-series with CroMoly shell and spindle can already compete with the finest and most expensive BBs on the market, the 600-series offers a unique stainless steel shell, spindle, balls and rollers. These BB-units offer not only eternal beauty and high prestige, but also ultimate durability and reliability.

From the **economical point of view** there are some serious advantages regarding the new SKF BB-units to be considered:

- Significant reduction of cost for warranty claims (2 years legal warranty in the EU).
- Free choice of crank sets from different makers.
- Unique value added product.
- Improved price-quality ratio.
- Reduced assembly cost and less trouble with the tolerances in the BB-shells (especially in welded aluminium frames).

Design a better bike - with SKF

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