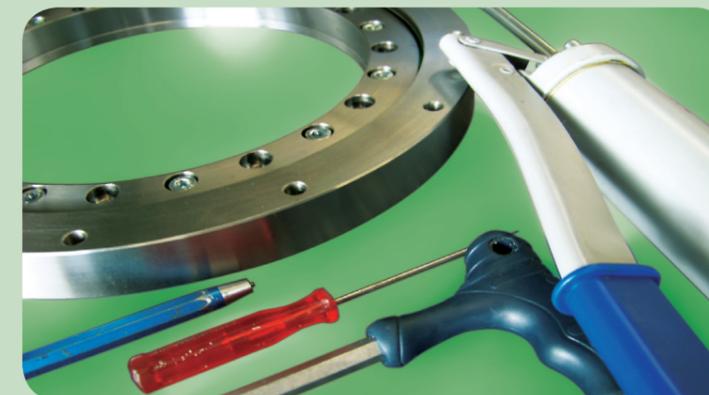


Initial operation and maintenance



Mounting and dismounting of bearings

Due to its opened bearing rings and the cage with held and guided rolling elements, the fitting of the SLIM-SPLIT-BEARING is simple. Compared to common massive bearings it is not necessary to press fit slimsplit bearings. Due to the structural shape of this bearing. It easily can be mounted and dismounted. It also does not require certain tools or thermal support. So, turned bearing fits with H- or h7-fits for shaft and bore tolerances (see fitted dimensions) suffice to contain a bearing.

Precision

The bearing rings of the type series SLIM-SPLIT-BEARING are very accurate in shape. The difference of the even-thickness between raceway and inside or outside diameter is really small. That's why the axial radial precision of the bearings is greatly influenced by the precision of the connecting parts. The connecting parts should be constructed in a way that all diameters and faces that stay in relation to each other are machined in one spanning operation, if possible. So, the customer is able to define and manufacture the demands on precision on his own.

Bearing clearance

The SLIM-SPLIT-BEARING has no fixed clearance in the bearing and the preload of the bearing is not defined. Either this can be adjusted by the customer directly by determining the shaft and bore tolerances of the bearing fits. In the standard version and with given fitted tolerances, the SLIM-SPLIT-BEARING is slightly preloaded in the raceway system. This means that even if tolerances are used to the maximum, no clearance in the bearing is given. Depending on the application and the specific demands, a clearance can be given by adjusting the shaft and bore tolerances in order to reduce the starting torques. Also the tolerances can be adjusted in order to increase the preload, which increases the starting torque of the bearings drastically. If insert rooms should be given e. g. a competitive products shall be replaced, and therefore can't be adjusted, the clearance in the bearing can be adjusted. This adjustment is achieved by using slightly bigger or smaller rolling elements.

For different demands on a bearing type, differently colored cage strips with different sorts of rolling elements can be used.

These different colors make it easy to find the most suitable bearing version.

Lubrication

In order to increase the nominal service life, Lubrication is an important criteria.

For 90 % of all bearing applications in standard operations, grease is sufficient.

Grease of the consistency-class 2 and 3 (acc. to DIN 51818) is preferred. The grease prevents the direct contact between rolling element, raceway and cage and minimises therefore the friction. This minimises the abrasion and increases lifetime.

As the lubricant for KMF-SLIM-SPLIT-BEARING has not the function to protect the bearing from corrosion, relatively small amounts of grease is sufficient for a reliable function.

The KMF-SLIM-SPLIT-BEARING is equipped standardly with a pregreasing using ALVANIA EP2 (Shell), which functions as a permanent lubrication at normal operating conditions. That's why no targets for lubricating intervals or lubricating amounts are given. KMF-bearings require low maintenance and can be considered for normal slewing operations as maintenance free.

For special applications, the KMF-SLIM-SPLIT-BEARING can be equipped with special greases according to customers demands.

In order to differ these versions from the standard bearings, a short sign is added to the KMF-type. Some examples at the right side:

Short sign	Lubricant
G04	Solid lubrication with MOS2
G22	High temperature grease +260°C
G23	Dynamic light bearing grease for low torques
G24	For applications in high vacuum
G25	Radiation resistant grease for medical applications



Filling of the bearing



Integration of the snap-over separator strip



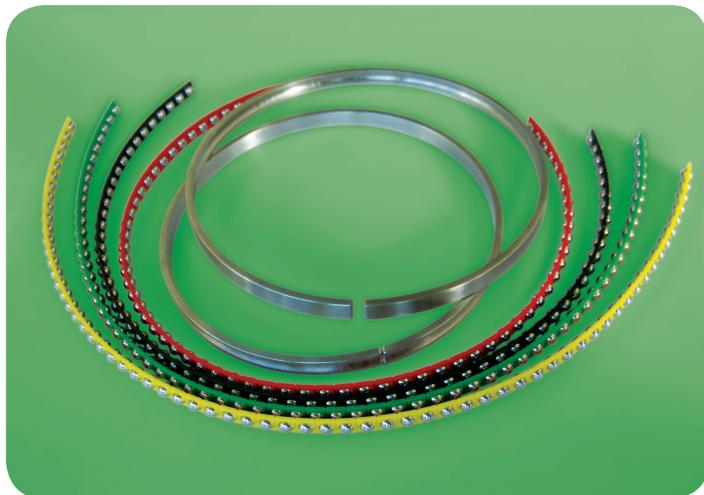
The Conrad-Filling-Method

The picture on the left side shows how conventional bearings have to be assembled; this way is also known as the Conrad-Filling-Method. The bearing inner ring is placed excentrically in order to cause a bigger bearing gap on the opposite side. Using this bigger bearing gap, the balls are integrated into the raceway system. This bearing gap determines and fixes the maximum amount and the maximum diameter of the balls that can be integrated into the bearing.

After that a snap-over cage strip with large ball divisions is integrated in order to place the balls equally in the raceway system and prevent them of touching and running against each other.

Due to this only possibility of assembling a conventional bearing, only a few, and compared to the bearing cross-cut, relatively small balls can be integrated. This fact influences the static dynamic load capacities negatively.

Important notices for all types of bearings



The cage strips are filled with different ball diameters.
Different colors help differing the individual diameters.



End assembly



The KMF- Method

The SLIM-SPLIT-BEARING is only manufactured with splitted bearing rings. Beneath the adjustability of the bearing clearance and the bearing preload, there are additional advantages: The bearing can be fitted more easily in the connecting parts and great advantages are given during the assembly.

Besides the quality advantages that are offered by our products, they also offer price advantages due to our manufacturing technology and easy assembly.

An automatically filled cage strip is placed on the inner ring, the outer ring is placed in assembly condition and has just to be pressed slightly over the inner ring and the separator. Due to this filling method, KMF is able to integrate much more and much bigger balls in the same cross-cut of the bearing.

This greatly influences our static and dynamic load capacities compared to the equivalent competition bearings.