

3. Notes on Design and Installation

3.4 Installing the ball cage

If ball cages are used in conjunction with open guide bushes, the ball cage and the guide shaft should run together into the bush. Since undersizing (preloading) is employed, this method is only one that can prevent the balls sliding between the bush and shaft. In the case of rotary stroke bearings with closed guide bushes, the guide shaft must be inserted against the preloading pressure. Lubrication grease is advisable to prevent the balls becoming flattened.

Particularly in the case of ball cages with larger diameters, it must be ensured that the cage is properly centered in the guide bush.

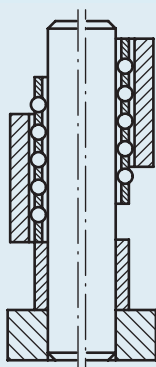
Limit stops for the ball cage

Despite the fact that the guide moves non-positively subject to preloading, the ball cage can alter its position axially ("cage creeping").

In rotary stroke bearings with an open guide bush, the path of the cage must be limited such that the ball cage cannot move out of the guide beyond a certain amount. This can be ensured by using fixed or sprung stops.

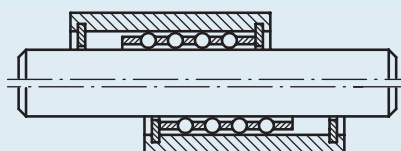
- Stop bush which is pushed loose over the shaft and stops the cage at the linear reversing points.
- Clamping bush which can be fixed to any point of the shaft.
- Safety rings which limit a defined path.
- Pressure springs

Fixed stops



Stop bush

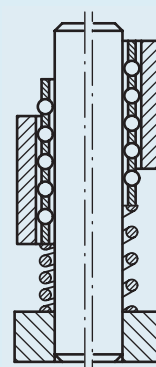
Fig. 12



Safety rings in the bush

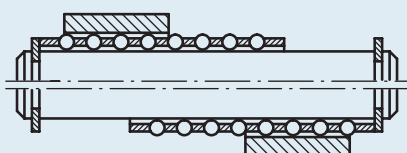
Fig. 14

Sprung stops



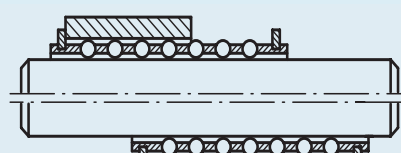
Pressure spring on one side

Fig. 16



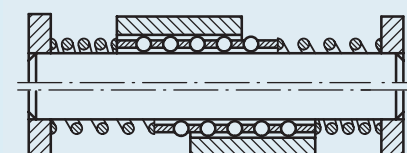
Safety rings on the shaft

Fig. 13



Safety rings on the ball cage

Fig. 15



Pressure springs on both sides

Fig. 17