

16. LINEAR BALL BEARINGS



LINEAR GUIDANCE SYSTEM

PROWADNICE LINIOWE



PRECISION LINEAR

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TABLES:

16. LINEAR BALL BEARINGS

16.1. Thin-walled and solid linear ball bearings

INTRODUCTION:

16. Linear ball bearings

16.1. Main series:

- **LM..** - solid, Japanese dimension standard, sealed
- **KB..** - solid, European dimension standard, sealed

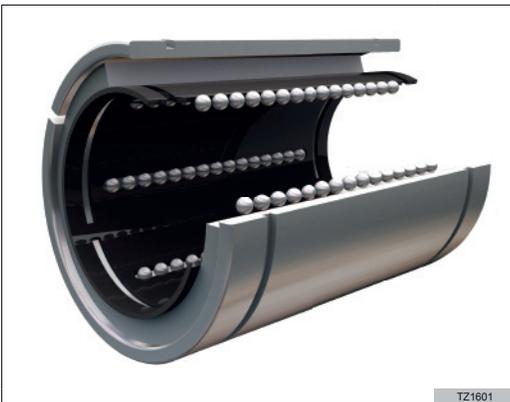


Fig.55 Solid linear ball bearing



Fig.56 Thin-walled linear ball bearing

16.2. Features

Systems of linear movement matter more and more in modern technological solutions. Because of a very high guiding precision, compact construction, and considerable load carrying capacity as well as longevity at the same time, they are among the best solutions of today automatics.

The number of visible rows of balls inside the linear ball bearing does not result from its series but rather from the bearing size.

Linear ball bearings are also commonly called rolling sleeves. There are also many interacting elements besides linear ball bearings themselves: e.g. rods, rails and housings.

Solid linear ball bearings are available in two dimension standards, whereas all versions are standard sealed from both sides. Dimension standards, Japanese (LM) and European (KB) differ slightly from each other in main dimensions.

They are available in three versions, appropriate designations can be found behind the symbol:

- **..UU** basic version without cuts
- **..AJ** narrow cut for clearance adjustment
- **..OP** wide cut, adapted for operation on profiled rails.

NOTE. UU symbol means generally a seal, but in case of the AJ- and OP-type linear ball bearings it is omitted despite the fact that they are sealed.

- **KH..PP** – Thin-walled, European dimension standard, sealed (PP) ensuring the minimum cross-section of the bearing-closed pairs at high load carrying capacity. Key feature is that the returning row of balls can be seen from the outside through cuts in the outside housing.