Bearings

1/ Watch the video: Than listen and fill in the gaps.

(note: shaft = hřídel; hub = náboj)

A common example of a shaft-hub _____ is a shaft connected to a bearing. A bearing is a part of a machine that supports a moving part, especially one that is _____. Bearings are divided into **plain bearings** and rolling-element bearings known as **rolling bearings** or as friction bearings. The _____ of them are plain bearings that comprise just a bearing surface and no rolling elements. Plain bearings can take the form of a **bushing** or they can be a two-piece plain bearing. A bushing is _____ to a bearing except that it is usually a one-part device whereas a bearing may have two or more parts. Plain bearings must be made of a material that is _____. It can be, for example, brass, steel, bronze or plastic.



A rolling bearing is used to _____ friction by placing round elements between its two parts. There are five types of rolling elements that are used in rolling bearings: balls, cylindrical rollers, tapered rollers, spherical rollers, and needles.

Ball bearings use balls as _____ elements.

Cylindrical roller bearings use cylinders whose _____ is slightly greater than their diameter.

Needle roller bearings use very long and t_____ cylinders. Since the rollers are thin, the outside diameter of the bearing is only slightly larger than the diameter of the _____ in the middle.

Tapered roller bearings use conical rollers that run in a conical raceway.

Spherical roller bearings use rollers that are _____ in the middle and thinner at the ends; the raceway is shaped to match.

There are two types of row designs: **single-row bearings** and **double-row bearings**. Most ball bearings are a single-row design, which means there is one row of rolling _____ in them.

A double-row design has two rows of rolling elements. Their _____ is that they need better alignment than single-row bearings.

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2) Match the Czech and English terms.

ball bearing	**válečkové ložisko**
cylindrical roller bearing	**jehlové ložisko**
spherical roller bearing	**valivé ložisko**
tapered roller bearing	**jednořadé ložisko**
needle roller bearing	**pouzdro**
plain bearing	**kuličkové ložisko**
bushing	**dvojřadé ložisko**
rolling bearing	**kuželíkové ložisko**
single-row bearing	**kluzné ložisko**
double-row bearing	**soudečkové ložisko**



3/ Choose the expressions from ex. 2 and write them next to the definitions.

1. **Bearing with long, thin cylindrical rollers at least four times greater in length than their diameter.**
2. **Bearing which uses small spheres as rolling elements**
3. **Bearing that has no rolling elements.**
4. **Bearing with cylindres of slightly greater length than width as rolling elements.**
5. **Bearing with round elements between the inner and outer rings to reduce friction.**
6. **Bearing with only one row of rolling elements.**
7. **Bearing with cylinders that are thicker in the middle and thinner at the ends.**
8. **Bearing with two rows of rolling elements**
9. **Plain bearing that consists of one part only.**
10. **Bearing with rolling elements of a conical shape.**

4. Listen to the dialogue and write if the sentences are true (T) of false (F)

(note: thrust bearing = axiální ložisko)

1. **Roller bearings contain rolling elements of different shapes.**
2. **A bearing cage is used in plain bearings.**
3. **Thrust bearings carry axial loads.**
4. **A bearing can be inserted into a housing.**
5. **Bearings can only be made of metals.**

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