

### The spherical roller bearing



#### 1. To what degree can spherical roller bearings compensate for misalignments?

- a) 90°
- b) 2°
- c) 10°
- d) 4°

#### 2. What shape are the rolling elements of spherical roller bearings?

- a) Spherical shape
- b) Barrel shape
- c) Needle shape
- d) Cylinder shape

#### 3. What are the advantages of spherical roller bearings?

- a) They are completely self-aligning
- b) They can take combined loads
- c) They have a high load-bearing capacity
- d) The rolling elements can counteract misalignment

#### 4. What is the biggest limitation of spherical roller bearings?

- a) They are excessively expensive
- b) They can only compensate for dynamic misalignments
- c) They have a low load-bearing capacity
- d) They are only capable of absorbing loads from a purely axial direction to a limited extent

#### 5. Which bearing type number belongs to spherical roller bearings?

- a) 2
- b) 4
- c) 6
- d) 8

#### 6. Which bearing types have asymmetrically ground rollers?

- a) EM type
- b) EG15 type
- c) EMA type
- d) B type

#### 7. What disadvantage do asymmetrically ground rollers have?

- a) Poor kinematic rolling behaviour
- b) A lower load rating compared to the symmetrical roller
- c) Combination only possible with a sheet steel cage
- d) Can only be used at operating temperatures up to 150 °C

#### 8. What is the difference between the EM type and the EA type?

- a) The EM type is equipped with a one-piece solid brass cage, the EA type with a sheet steel cage
- b) The EM type is specifically made for simpler applications
- c) The EA type has an inner ring guide lip
- d) In contrast to the EA type, the EM type is more shock and vibration resistant
- e) EMA designs can be more expensive due to the elaborate production technology





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## 9. The EM type and the EMA type differ from each other in the reinforcement of the solid brass cage.

- a) Correct
- b) Incorrect

#### **10.** By using a polyamide cage, it is possible to use the EG15 type at temperatures above 200 °C.

- a) Correct
- b) Incorrect

#### 11. In which applications must sealed spherical roller bearings be used?

- a) For particularly high operating temperatures
- b) For particularly high vibrations
- c) In environments where foreign particles could enter the bearing
- d) If no complicated installation is possible

#### 12. Which statements are true?

- a) Spherical roller bearings with a tapered bore require an adapter sleeve
- b) Assembly is particularly complicated with a tapered bore
- c) Spherical roller bearings with a cylindrical bore are used in applications with limited space
- d) Spherical roller bearings are universally applicable rolling bearings