INNER CONSTRUCTION OF THE BEARINGS

Single Row Deep Groove Ball Bearings
- Bearing Design: open, shields on both sides, seals on both sides
- Properties: - high radial and axial load rating in proportion to its outer dimensions
  - little sensitivity to stress, which can occur while mounting the belt pulley, shaft, etc.
- Application: asynchronous and synchronous electric motors

Single Row Angular Contact Ball Bearings
- Bearing Design: raceways of the rings are designed in such a way that the connecting line of their contact points with the balls creates with the perpendicular line to the bearing axis an acute angle
- Properties: - it allows to accommodate radial loads acting simultaneously with a relative high axial load in one direction
  - for axial load accommodation in both directions the bearings are arranged in pairs against each other
- Application: on the rear part of the shaft in bigger motors, especially when there is large axial load in one or in both directions

Single Row Cylindrical Roller Bearings
- Bearing Design: the bearings are separable and are produced in several designs
- Properties: higher load rating in comparison to ball bearings of the same size
- Application: medium and big electric motors, mainly on the rear part of the shaft

TOLERANCE OF THE ABUTMENT DIMENSIONS IS MIN. P6
LOW VIBRATION LEVEL
RADIAL PLAY C3 OR IN AGREED RANGE
ABUTMENT DIMENSIONS NONCONFORMING TO CATALOGUE VALUES

SPECIFIC REQUIREMENTS FOR ELECTRIC MOTOR BEARINGS

CHARACTERISTICS OF ELECTRIC MOTOR BEARINGS

www.zvlslovakia.sk
NEW GENERATION OF ZVL BEARINGS FOR ELECTRIC MOTORS

**CAGE DESIGN**
- new production processes are used (pressing, scouring)
- the design ensures lower friction (higher surface quality)
- lower noise production
- it is possible to deliver bearings with plastic cage on request

**SEAL DESIGN**
- standard material: NBR
- for higher temperatures we offer suitable materials HNBR, FKM, VITON
- optimized sealing performance — lower friction supports higher rotation speed of the bearings

**GREASE**
- ensures additional lowering of the noise level
- grease is adjusted to the operational conditions (in some cases highly specialized grease)
- the grease ensures long failure-free operation of the bearings
- the properties of the grease are tested with the help of special equipment

**SPECIAL BEARING DESIGNS FOR ELECTRIC MOTORS**

To avoid passing of the electric current ZVL SLOVAKIA is preparing:
- Bearings with ceramic balls
- Insulation of Bearings with special coating

Arrangement Example of ZVL bearings in an Electric Motor:

**INNOVATION OF BEARINGS**

Influence of the Innovation of the Inner Construction on the Operation Life

Influence of the Innovation of the Inner Construction on the Frictional Moment

30% increase in operational life
34% reduction of the frictional force
ELECTRIC MOTOR BEARINGS /01/2017