



# INSOCOAT bearings

Electric motors, generators and associated equipment are at risk when an electric current passes through their bearings. This can damage the contact surfaces of rolling elements and raceways in the bearings (electrical erosion) and rapidly degrade the grease. An additional risk in electric motors and generators comes from high frequency currents caused by the inherent stray capacitance. The risk of damage increases where the application uses a frequency converter.



INSOCOAT bearings:

are designed to prevent electric current from passing through the bearing  
have the external surfaces of either their inner or outer ring coated with an insulating aluminium oxide layer, by applying a sophisticated plasma-spray process for an outstanding quality finish  
are a very cost-effective solution compared with other insulation methods

## Bearing features

### Protection against electrical erosion

With insulating properties integrated into the bearing, INSOCOAT bearings can improve reliability and increase machine uptime by virtually eliminating the problem of electrical erosion.

### High electrical resistance

The aluminium oxide coating provides a minimum electrical resistance of 200 M $\Omega$  and can withstand voltages up to 3 000 V DC.

### Consistent electrical performance

Plasma-spray coatings are normally hygroscopic and, therefore, vulnerable to penetration caused by condensation. To protect against this effect, INSOCOAT bearings are treated with a unique sealant.

## Assortment

The standard assortment of INSOCOAT bearings listed here constitutes the most commonly used sizes and variants of:

single row deep groove ball bearings (fig. 1)

single row cylindrical roller bearings (fig. 2)

For bearing types and sizes not listed in the product tables (→ Deep groove ball bearings, Cylindrical roller bearings), contact SKF.

For applications where smaller bearings than those listed are needed, SKF recommends using SKF Hybrid bearings.



fig. 1



fig. 2

In addition to the standard assortment, SKF can supply special INSOCOAT bearings and bearing units with complex ring geometries, such as:

Four-point contact ball bearings (fig. 3)

Flanged tapered roller bearings (fig. 4)

Tapered roller bearing units (TBU) (fig. 5)

Traction motor bearing units (fig. 6)

For availability and detailed information, contact SKF.



fig. 3



fig. 4



fig. 5



fig. 6