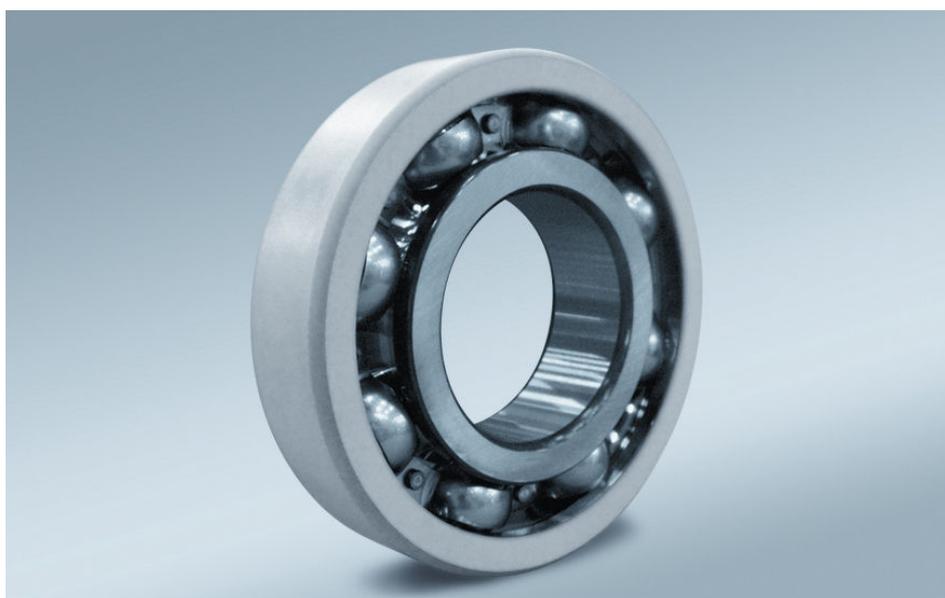


ELECTRICALLY INSULATED BEARINGS

Deep Groove Ball and Cylindrical Roller Bearings

Ceramic-Coated (SQ77) Deep Groove Ball and Cylindrical Roller Bearings with high insulation resistance are optimal for applications that are susceptible to bearing damage and failures due to electrical leakage. Ceramic-coated ball and roller bearings are plasma sprayed to ensure a proper bonding to the bearing steel allowing normal fitting practices. These bearings are supplied across the world for industrial motors & generators, traction motors and wind energy applications.



Condition Description:

- ✓ Electrical Corrosion

Product Features:

- Ceramic-coated bearing ring
- Optimized thickness of ceramic coating
- High durability of the coating due to specific plasma spray process
- Available with standard bearing dimensions
- Performance characteristics of the bearing maintained (load/speed)

Product Benefits:

- High insulation resistance
- Will insulate differentials of more than 500V AC or DC (SQ77)
- Will insulate differentials of more than 1000V AC or DC (SQ771)
- Cost efficiency due to increased bearing life
- Special preparation of the housing bore is not required
- Thermal conductivity between bearing and the housing remains unaffected

Applications:

- Electric Motor
- Generator
- Wind Turbine
- Traction Motor

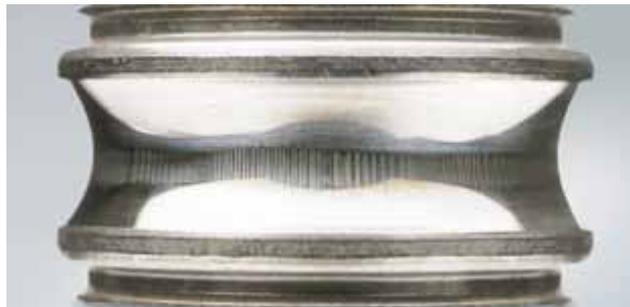
63 22 C3 /SQ77

Bearing Type ———
 Bearing Bore Code ———
 Radial internal Clearance ———
 Electrically Insulated Outer Race

ELECTRICALLY INSULATED BEARINGS

Deep Groove Ball and Cylindrical Roller Bearings

Recent years has seen an increase of new drive installations that fail only a few months after start-up. This failure can be caused by stray high frequency currents that flow through the motor bearings. While bearing currents have been around since the advent of electric motors, modern motor design and manufacture have nearly eliminated low frequency bearing currents. Now commonly used Variable Speed Drives (VSD) with their fast rising voltage pulses and high switching frequencies can cause current pulses through bearings. A single pulse is likely insignificant; however the switch frequency of modern AC drives is very high and the vast number of pulses accumulate quickly. The repeated discharging erodes the bearing races through a process known as Electrical Discharge Machining (EDM).



When electric current passes through a bearing, arcing and burning occurs through the thin oil film at points of contact between the race and rolling elements. The points of contact are melted locally to form “fluting” or groove-like corrugations which are seen by the naked eye. The magnification of these grooves will reveal crater-like depressions which indicate melting by arcing.

To overcome this problem, NSK supply insulated ball bearings and cylindrical roller bearings from stock. Other sizes are available as well as tapered roller bearings, four-point contact bearings, and angular contact ball bearings.

Stock available from New Zealand		
6212C3/SQ77	6311C3/SQ77	6320C3/SQ77
6213C3/SQ77	6312C3/SQ77	6322C3/SQ77
6217C3/SQ77	6313C3/SQ77	6324MC3/SQ771
6218C3/SQ77	6314C3/SQ77	6326MC3/SQ771
6219C3/SQ77	6315C3/SQ77	NU319EM6C3/SQ77
6222C3/SQ77	6316C3/SQ77	NU322EM6C3/SQ77
6224C3/SQ77	6317C3/SQ77	NU326EM6C3/SQ77
6226C3/SQ771	6318C3/SQ77	NU328EM6C3/SQ77
6309C3/SQ77	6318C3/SQ77	For more sizes & types, please contact NSK NZ
6310C3/SQ77	6319C3/SQ77	

* Subject to prior sale

For more information about NSK products, please contact:

www.nz.nsk.com