PRODUCT SPEC SHEET
MEGAOHM CYLINDRICAL ROLLER BEARINGS

MEGAOHM™ 7MC3 Series Ceramic Insulated Cylindrical Roller Bearings

The increase in volume of variable frequency drive (VFD) electric motors as well as other machines where electrical currents are present has demanded the need for insulated bearings. If an electrical current passes through a standard steel bearing, it will cause an arc between the rolling element and the raceway surface. The arc, will elevate the temperature beyond the service limit and ultimately cause damage to the steel at the surface, leading to premature failure. Electrical pitting and fluting can be prevented using ceramic coated bearings due to the non-conductive properties of ceramic.

Coated bearings

NTN's MEGAOHM 7MC3 Series of insulated bearings has been specifically designed to prevent the damage cause by electrical arcing between the rolling element and the raceway surfaces in a variety of applications. Coating the bearing's outer ring provides an cost-effective insulating barrier against any stray currents that would be present.

Trusted by OEMs

MEGAOHM 7MC3 Series insulated bearings are designed to resist electric current damage and offer protection to costly equipment which is why they are used by OEMs for wind turbine generators, traction motors, paper and textile rolls, VFD and other electric motors used across many industrial applications.

MEGAOHM 7MC3 Series Advantages

- Ceramic coated for electrical insulation that prevents electrical pitting and fluting
- Drop-in replacement for standard bearings
- Cost-effective solution to combat stray electric currents
- Brass cage comes as electric motor industry standard

MEGAOHM 7MC3 Series vs. The Competition

	NTN 7MC3	Leading Competitor
Coating Thickness	0.2 mm	0.1 mm
Electrical Resistance at 500 V (DC)	> 2,000 MΩ	> 100 MΩ
Voltage Resistance	> 3 kV	< 3 kV
Drop Test (up to 0.8 m)	0 of 8 damaged	3 of 8 damaged

EM ELECTRIC MOTORS

Prefix		Type	Series	Bore Diameter	Internal Design	Cage	Clearance
7MC3	–	NU	2	12	E	GRB	C3

1. **Prefix**
   7MC3: Ceramic coating

2. **Type**
   NU: Straight inner ring w/outer ring and roller assembly

3. **Series**
   2: ISO 02 Series
   3: ISO 03 Series

4. **Bore Diameter**
   00: 10mm
   01: 12mm
   02: 15mm
   03: 17mm
   04+: # * 5 = bore diameter in mm (ex. 07=35 mm)

5. **Internal Design**
   E: High-capacity CRB

6. **Cage**
   GRB: Brass cage

7. **Clearance**
   C3: Clearance greater than normal

Ceramic Insulated Cylindrical Roller Bearing Offering
7MC3-NU212EGRBC3
7MC3-NU220EGRBC4
7MC3-NU222EGRBC3
7MC3-NU313EGRBC3
7MC3-NU317EGRBC3
7MC3-NU318EGRBC3
7MC3-NU319EGRBC3
7MC3-NU320EGRBC3
7MC3-NU322EGRBC3
7MC3-NU324EGRBC3
7MC3-NU328EGRBC3

EM **ELECTRIC MOTORS**

Beyond Bearings

Training. Installation Support. Trouble-shooting. And more.

When you choose NTN, your team is equipped with all the necessary tools and resources to get the job done right. From installation to problem-solving, we'll be there with the hands-on support you need to take on your toughest challenges. This includes extra services such as:

Technical Training Unit
On-site, mobile training unit offering specialized, hands-on instruction from NTN engineers

Product Training School
Three days of in-depth instruction from our engineers at NTN headquarters **(go.ntnamericas.com/trainingschool)**

eKnowledge
WEB-BASED TRAINING PROGRAM

Six online product training modules covering different bearing types and nomenclature **(www.ntnamericas.com/eknowledge)**

NTN Bearing Finder
Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings **(bearingfinder.ntnamericas.com)**