

## HDY2

### Ceramic coated insulating bearings

NSK's new ceramic coated insulating bearings are designed to support energy efficiency and the expanding adoption of inverter-controlled motors, while effectively contending with the associated risk of electrical current damage to bearings. With advancements in product design to optimize insulation and thermal conductivity characteristics, NSK's HDY2 series bearings deliver a reliable contribution to energy efficiency and reduced power consumption.

#### Proven benefits

- › Effective prevention of electrical corrosion damage
- › Superior insulation properties, with performance improved greater than 10 times
- › Insulation resistance is 100 GΩ at 1000V DC (1GΩ = 1000MΩ)
- › No breakdown voltage before 6000V DC operating voltage
- › Improved durability, with new optimized coating demonstrating 3 times the shock resistance of conventional ceramic coated bearings
- › Excellent heat dissipation
- › Dimensionally interchangeable with standard bearings

#### Conditions:

**EC**

ELECTRICAL CURRENT

**HS**

HIGH SPEED

**Q**

LOW NOISE



## Design features

- › Alumina-based ceramic coating material with optimized additives
- › Bearings are plasma sprayed to ensure appropriate bonding to the bearing steel
- › Coating is sealed with a special acrylic resin
- › Bearings are manufactured from ultra clean steel for extended fatigue life
- › High-grade balls for quiet and smooth operation at high speeds
- › Super finished raceways - minimize noise and improve lubricant distribution
- › Available for series 62 from 75 to 130 mm bore diameter; for series 63 from 60 to 110 mm bore diameter
- › Open type, with C3 radial internal clearance

## Applications

- › Industrial motors
- › Power generation

## PRODUCT PERFORMANCE

FIG. 1 - BREAKDOWN VOLTAGE

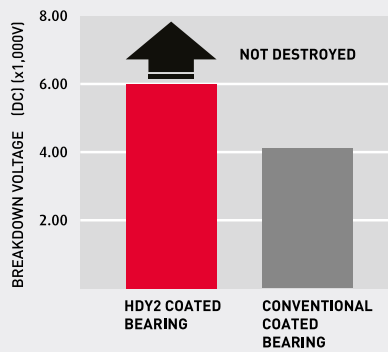


FIG. 2 - INSULATION RESISTANCE (@ DC 1,000V)

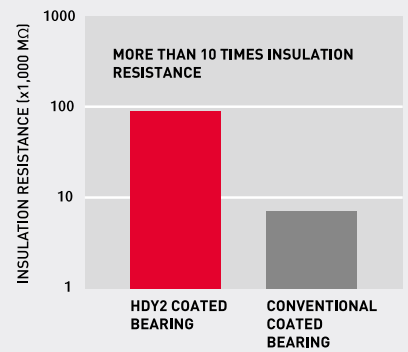


FIG. 3 - MECHANICAL STRENGTH : CERAMIC COATING IMPACT TEST RESULTS (6311 OUTER RACE)

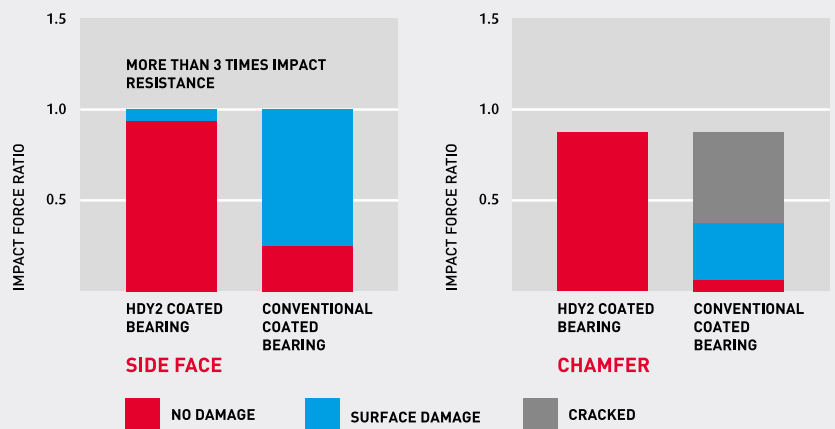


FIG. 4 - HEAT DISSIPATION PERFORMANCE (6311 OUTER RACE)

