

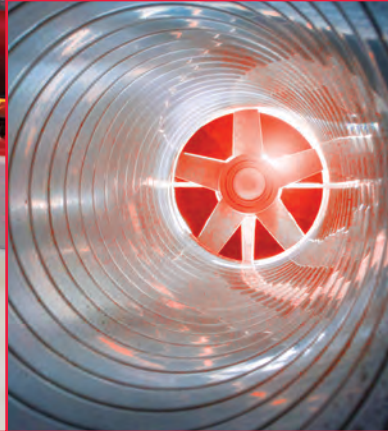
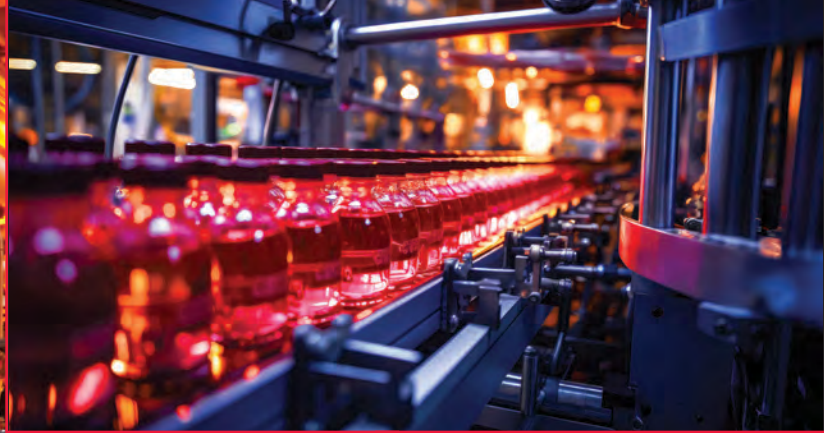
NSK

HDY2 CERAMIC-COATED INSULATING BEARINGS

FOR SUPERIOR RESISTANCE TO ELECTRICAL EROSION



STAY IN MOTION. STAY IN CONTROL.



**SMOOTH. QUIET.
EFFICIENT.**

SINGLE ROW DEEP GROOVE BALL BEARINGS

Single row deep groove ball bearings are inarguably the most widely used and versatile bearing type, owing to their simple, low-maintenance design and robust performance. NSK deep groove ball bearings deliver superior total operating and energy efficiency through our core development and manufacturing technologies with:

- › Optimized rolling contact for reduced noise, energy use and power loss
- › Advanced lubricant technologies and seal designs for durability and reliability
- › Special materials, coatings and innovation to contend with extraordinary environments
- › An extensive catalog of types and variants for easy adoption

For virtually any rotating machinery and equipment application – in virtually any working environment – NSK deep groove ball bearings quietly deliver exceptional performance and a reliably long service life for lower total cost of operation.

SUPERIOR INSULATION RESISTANCE AND LONGER BEARING LIFE

NSK's HDY2 ceramic-coated insulating bearings are designed with optimized insulation and thermal conductivity characteristics to support energy efficiency and the growing adoption of inverter-controlled motors, while effectively contending with the associated risk of electrical current damage to bearings. .

PROVEN BENEFITS

- › Effective prevention of electrical erosion damage
- › Superior insulation properties, with performance improved greater than 10 times
- › Exceptional durability, with optimized coating demonstrating 3 times the shock resistance of conventional ceramic-coated bearings
- › Excellent heat dissipation
- › Dimensionally interchangeable with standard bearings



DESIGN FEATURES AND PERFORMANCE CHARACTERISTICS

NSK's HDY2 series ceramic-coated bearings deliver superior insulation resistance and longer bearing life in applications susceptible to electrical erosion or arcing in bearings, resulting in optimized reliability and efficiency in industrial motors.

DESIGN FEATURES

- › Manufactured from ultra-clean steel for long rolling fatigue life
- › High-grade balls deliver quiet and consistent operation at high speeds
- › Open-type bearing equipped with a pressed steel cage
- › C3 radial internal clearance is standard
- › Bearing outer ring is coated with an alumina-based ceramic material combined with an optimum blend of additives
- › Bearings are plasma sprayed to ensure appropriate bonding to the bearing steel
- › Ceramic coating is sealed with a special acrylic resin for moisture resistance
- › Dimensionally interchangeable with standard bearings (in accordance with ISO)



High-grade balls for smooth, low-noise operation at high speeds

High-purity steel for superior fatigue strength

Pressed steel cage with tightly controlled clearances for reduced friction

Alumina-based ceramic coating sealed with a special acrylic resin delivers superior insulation resistance and moisture protection

RANGE OF AVAILABILITY

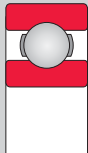
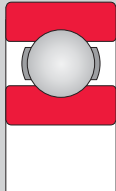
	62	63
Dimension Series		
Sizes	6214 to 26	6312 to 22

Fig. 1: AC insulation resistance

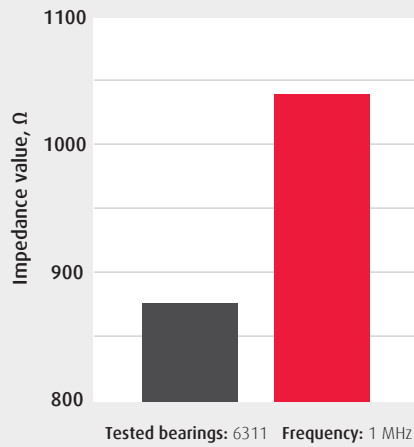


Fig. 2: DC insulation resistance

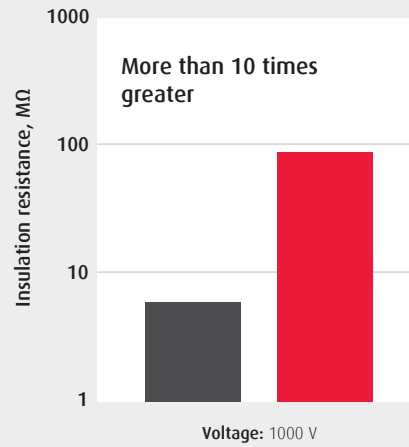


Fig. 3: Insulation breakdown voltage

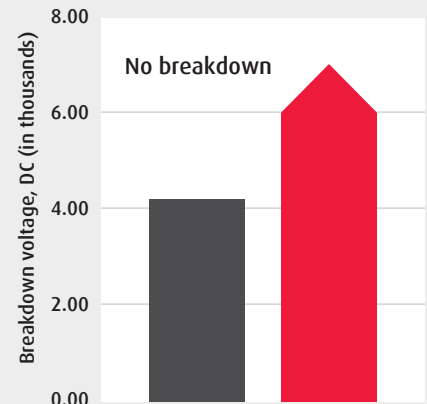
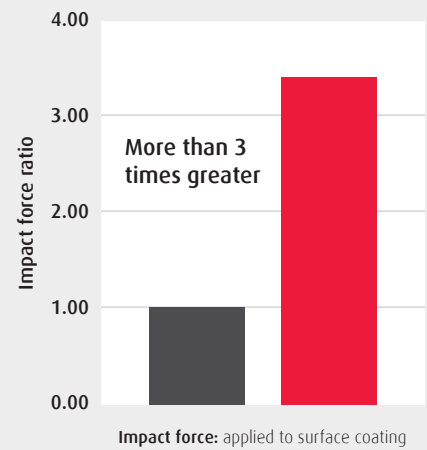


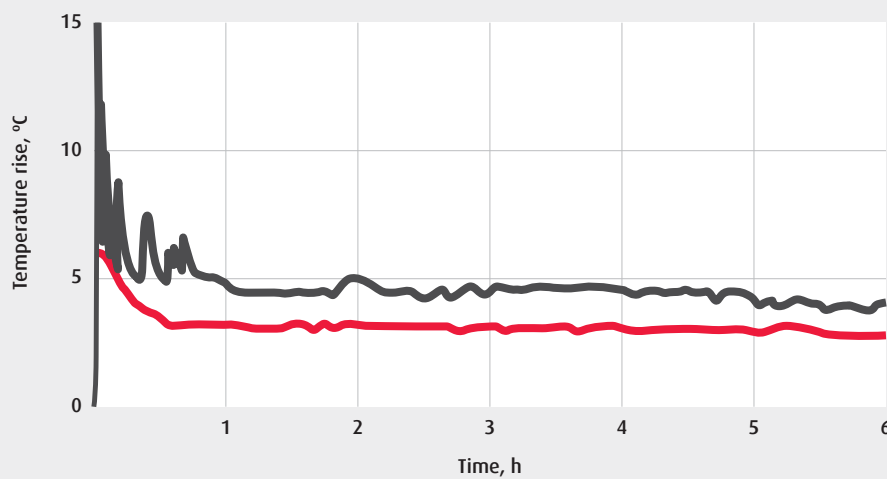
Fig. 4: Mechanical impact resistance



- ➔ greater resistance to electrical erosion refer to Figures 1 to 3
- ➔ easier handling and mounting refer to Figure 4
- ➔ reduced failure due to heat generation refer to Figure 5

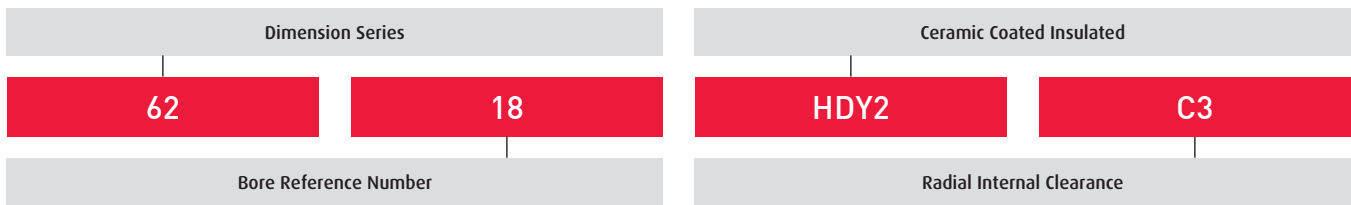
NSK HDY2 bearing
 conventional ceramic-coated bearing

Fig. 5: Heat dissipation performance



DESIGNATION SYSTEM AND RANGE OF AVAILABILITY

HDY2 CERAMIC-COATED INSULATING DEEP GROOVE BALL BEARINGS



BEARING NO.	BOUNDARY DIMENSIONS (MM)		
	Bore	O.D.	Width
6312HDY2C3	60	130	31
6313HDY2C3	65	140	33
6214HDY2C3	70	125	24
6314HDY2C3		150	35
6215HDY2C3	75	130	25
6315HDY2C3		160	37
6216HDY2C3	80	140	26
6316HDY2C3		170	39
6217HDY2C3	85	150	28
6317HDY2C3		180	41

BEARING NO.	BOUNDARY DIMENSIONS (MM)		
	Bore	O.D.	Width
6218HDY2C3	90	160	30
6318HDY2C3		190	43
6219HDY2C3	95	170	32
6319HDY2C3		200	45
6220HDY2C3	100	180	34
6320HDY2C3		215	47
6222HDY2C3	110	200	38
6322HDY2C3		240	50
6224HDY2C3	120	215	40
6226HDY2C3	130	230	40



DELIVERING PEAK EFFICIENCY AND RELIABILITY

ROLLING BEARINGS FOR INDUSTRIAL MOTORS

Optimized rolling contact for reduced noise, energy consumption and power loss. Advanced lubricant technologies and seal designs for durability. Special materials and coatings for insulation from current transmission.

With our extensive lineup of rolling bearings for industrial motors, NSK applies our core product development technologies and industry expertise to achieve total operating and energy efficiency with outstanding reliability.

From high-efficiency and inverter motors to servo and EV motors, NSK rolling bearings are engineered to run quietly, smoothly and trouble-free to deliver motive power to the world of industry.



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