

## Sales Expansion of “Plastic Insert Insulated Bearings”

### 1. Development background

As electric vehicles (EVs) and hybrid vehicles (HVs) are expected to become more widespread, electric pitting occurs when current passes through the bearings that support the drive motor. Bearings manufacturers are taking measures to prevent electric pitting.

Nachi has developed and launched plastic insert bearing by incorporating insulating plastic mold on either the outer ring or inner ring. Moving forward Nachi aims to expand the adoption of this bearing in EVs and HVs.

### 2. Features of “Plastic Insert Bearings”

#### ① Insulation performance

To prevent current from passing through the bearing, plastic material is molded onto the bearing side faces and outside diameter or bore surfaces to provide insulation performance.

#### ② Durability

Utilizing plastic materials and molding technologies that can withstand the harsh temperature changes in automotive applications, thereby ensuring durability.

#### ③ Versatility

By establishing plastic insert technology for the inner ring, which was previously difficult to achieve, NACHI can apply plastic insert on both the outer and inner rings, enabling optimal proposals tailored to customers’ usage conditions and environments.

#### ④ Multifunctionality

Plastic insert bearings are also effective in reducing creep at fitting surface.

### 3. Future developments

Mass production began in 2023, and the product has received high praise from automotive manufacturers. Going forward, NACHI plans to expand production to other manufacturers.



Plastic insert molding on inner ring



Plastic insert molding on outer ring