

# AUTOMOTIVE INDUSTRY



## Interesting Facts

- The global automotive bearing market, in terms of value, is projected to grow at 5.8% from 2015 to 2020 to reach **\$186.4 billion!!**
- Asia – Pacific is the fastest growing region at **7.8% per year**
- **Passenger Vehicles** generates maximum Demand of Bearings
- **CV and HCV** is a growing market
- **2 Wheeler** Market is very popular in Asia - Pacific



KYK Corporation Ltd.  
Osaka, Japan



# Automotive Wheel Bearings

Automotive Wheel bearings are classified by 2 type:

➤ Driven wheel

- The wheel that receives power from transmission and transforms it as rotational energy.

➤ Un-driven wheel

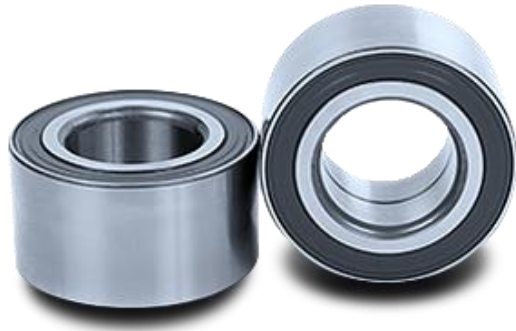
- This wheel is the one where the force is aided by the drive wheel and support the Drive wheel to accelerate speeds.

The modern day vehicles, Front wheels are generally the Driven wheels.



# Automotive Bearings

## Wheel Bearings - Classification



1<sup>st</sup> Generation



2<sup>nd</sup> Generation



3<sup>rd</sup> Generation

## 1<sup>ST</sup> Generation Wheel Bearings

### DAC Type



- These are compact bearing units which are provided with a defined and pre-adjusted bearing clearance, and comes with pre lubrication and sealing for life time of the bearing .

### TR Type



- They are of 2 types:
  - Double Row Angular Contact Ball Bearing ( DAC type)
  - Double Row Taper Roller Bearing ( TR type)
- They are used for driven and non driven Front and Rear wheels.



## 2<sup>ND</sup> Generation Wheel Bearings



- These are combining a double-row ball bearing unit and an integral mounting flange , with life time lubrication.
- Second generation wheel bearing replaces the function of a separate bearing unit.
- They sealed for life with induction-hardened raceways, the second generation wheel bearing is used with non-driven front or rear wheels.
- They can support **ABS**
- They are of 2 types:
  - Driven Wheels –Inner ring / outer ring rotation type
  - Non Driven Wheels –Inner ring / outer ring rotation type

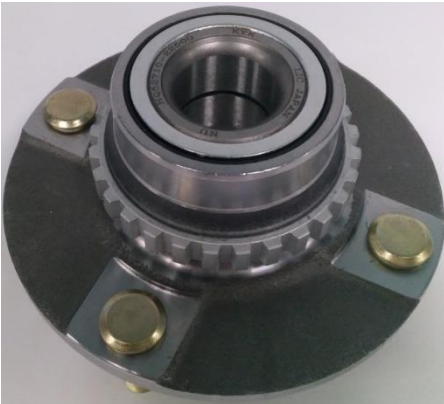
## 3<sup>ND</sup> Generation Wheel Bearings



- Wheel bearings of the 3rd Generation are highly integrated units with a mounting flange for the brake disc, wheel and wheel mount that guarantee highest running accuracy.
- Generally are 2 flanged; one flange is used to mount onto the Wheel and rotating arm Assembly and the other flange is used to mount on to the suspension assembly.
- Integrated speed encoders provide the required signal for ABS/ESP suspension control.
- Reduced total cost of mounting because of the double flange design. Consequently, reductions in function, comfort and overall bearing life caused by mounting influences are finally a thing of the past.
- For-life lubrication and sealing



## Wheel Bearings with integrated ABS pulse generator ring



- Nowadays there is an increase in the use of Wheel bearings with ABS magnetic seals and with a magnetic ABS pulse generator ring.
- These bearings also come with pre-set clearances as well as wheel hubs with integrated bearings with life time lubrication.
- The magnetic rings are fitted on the outside of wheel hubs with integrated bearings.
- The magnetic pulse generator ring, normally mounted on the wheel hub or drive shaft joint.



## Bearings Sealing



Integrated Seal



Rubber Seal



ABS Seal (Magnetic Seal)



## Lubrication



- The Role of Bearing Lubricant. Bearing Lubrication plays a vital role in the performance and life of rolling element bearings.
- KYK BEARINGS are filled with KYODO YUSHI Wheel bearing grease with excellent fretting resistance. Usable under severe operating conditions like high-temperature up to 170 °C and high-speed, until the life time of the bearing.

## Automotive Bearings

### Clutch Release Bearings



### Available For





# Automotive Bearings

## Tensioner Bearings



## Available For



# Automotive Bearings

## Alternator Bearings



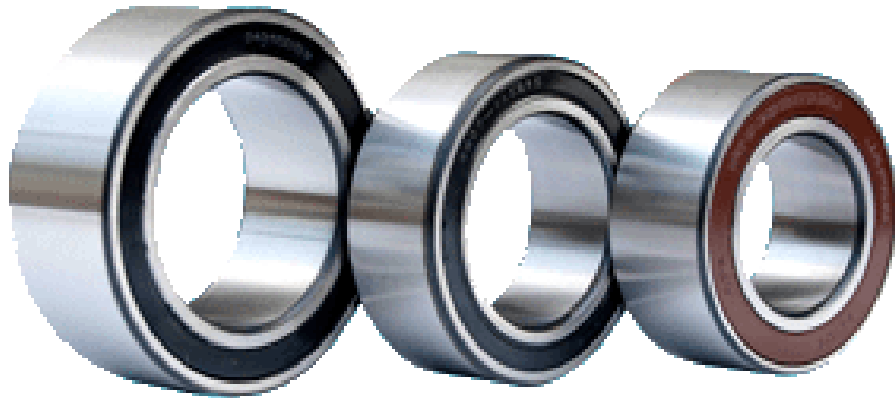
## Available For



# Automotive Bearings

AC Bearings

Available For



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# Automotive Bearings

## Universal Joints



## Available For

**European Agriculture, European Truck and trailers  
and**



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## 2 Wheelers / 3 Wheelers

- KYK bearings for 2 Wheelers and 3 Wheelers are designed for high performance in extreme operating conditions.
- KYK Bearings use premium quality of Steel Balls, Lubrication and Special Rubber seals reducing the frictional torque by about 30%.
  - Ball Bearings
  - 6200 – Series
  - 6300 - Series
  - Needle Roller Bearings
  - Tapper Roller bearings
  - One Way clutch bearings



## KYK Performance Warranty

- KYK Bearings are made using state-of-art Japanese technology and manufacturing system. Each bearing is individually inspected before packing.

### WARRANTY

KYK Automotive bearings lifetime warranty is for a period of 18 months from the date of Purchase or within 50,000 km, whichever is sooner.

- KYK bearings are designed for longer life.



**KYK Corporation Ltd.**  
Osaka, Japan



## About KYK

- **KYK Corporation Ltd.** (Formerly: Yamakai Bearing Ltd) is one of the oldest **Japanese Manufacturers** of ball and roller bearings, established in **1952**, in **Osaka, Japan**.
- Our bearings are supplied to more than **50 countries worldwide** and approved in a wide variety of engineering industries.
- KYK Bearings cater to the growing premium quality requirement of the market. Strict adherence to **Japanese Precision and Quality Standards** make KYK the preferred choice of product.



**KYK Corporation Ltd.**  
**Osaka, Japan**

## Our Network

**KYK Bearings** are supplied to more than 50 Countries Worldwide.

To become a **Distributor**, or find a Dealer in your area, please get in touch with us.



**KYK Corporation Ltd.**  
**Osaka, Japan**

## Advantages to Distributor

- **KYK Quality Advantage**
  - Join the KYK Distributor Club
- **Profit Potential**
  - Japanese Brand
- **Continuous development of Range**
  - New Items Constantly Under Development
  - Items can be developed against Samples/Drawings
- **Introduction of Ancillary Products**
  - V Belts
  - Oil Seals
- **Ready Stock Availability in Dubai**



**KYK Corporation Ltd.**  
Osaka, Japan



# Contact Us

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Official Distribution Partner for KYK Bearings



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Since 1953

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