



More Creative, More Innovative Excellence In Bearings



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# 1973 — Tomorrow



Wherever you need us, We are there

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## 1970's - Foundation Phase

### 1973. 07

Established ILJIN CORPORATION.

### 1978. 12

Established ILJIN FORGING  
(Currently ILJIN BEARING).

### 1978. 12

Started supplying transmission parts  
to Hyundai Motor Company.

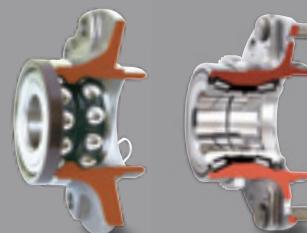
## 1990's - Growth Phase

### 1994. 01

ILJIN INDUSTRIAL (Presently ILJIN BEARING) signed  
a technological tie-up agreement with KOYO in Japan.

### 1994. 06

Started automotive bearing business and installed equipment  
to manufacture generation 2 wheel bearings.



### 1997. 07

Established ILJIN INDIA.

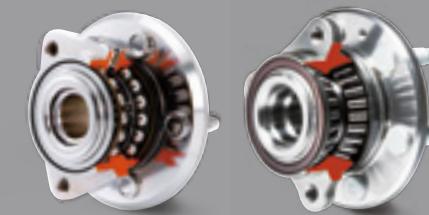
### 1999. 07~11

Started supplying wheel bearings, ball joints, tie rod ends and  
stabilizer links to Ford, Australia.

## 2000's - Global Growth

### 2000. 04

ILJIN INDUSTRIAL (Currently ILJIN BEARING) developed Generation 3 Wheel Bearings.  
Started providing Generation 3 wheel bearings to Federal Mogul.



### 2001. 11

Generation 3 wheel Bearings were selected as the next  
world-class product by Korean Government.

### 2002. 01

Established ILJIN AUSTRALIA.

### 2002. 03

Awarded key wheel bearing programs by 2 North American OEM's.

### 2002. 10

Established BEIJING ILJIN.

### 2003. 03

Established ILJIN USA and Tech Center.

# History

## 1980's - Take-off Phase

### 1982. 08

Established BLOXWICH KOREA  
(Currently ILJIN GLOBAL) as a joint venture company.

### 1986. 01

Established DONG-A INDUSTRIAL  
(Currently ILJIN Corp.).

### 1986. 02

Exported "center link" parts to Moog, USA.

### 1988. 11

Started manufacturing ball joints and tie rod ends.



## 2010's - The Second Take-off Phase

### 2010. 09

Established ILJIN ALABAMA.

### 2011. 05

Established BEARING ART.

### 2013. 06

Completion of BEARING ART Young-ju.

### 2014. 09

Established North America R&D Center.

### 2015. 06

Established CHONGQING ILJIN.

### 2016. 01

Established ILJIN GLOBAL INDIA.

### 2016. 01

Established Europe R&D Center.



# We provide world class solutions that meet our customers' needs.

Since establishment in 1973, ILJIN has led the global wheel bearing market through growth and innovation. We strive for the highest level of customer satisfaction through customer focus, a top-down quality focus, based on "creative innovation management."

Today ILJIN is a world class company that realizes the highest customer values.



## Creativity

- Capability for identifying new ideas and concepts and integrating varying perspectives
- Insight and observation continuously striving for improvement.
- Ability to proactively identify and solve problems.

## Teamwork

- Spirited teamwork to achieve our common objectives.
- Sharing information amongst team members, departments and within the corporation.
- Mutual cooperation and collaboration facilitates rapid, high quality solutions.

## Make It Happen

- Perform all work with professionalism and commitment.
- Sharing information amongst team members, departments and within the corporation.
- Mutual cooperation and collaboration facilitates rapid, high quality solutions.



04/05

## Message from the CEO

Hello.

Welcome to ILJIN, where our focus is on creating the ultimate customer satisfaction through the supply of the best quality products at the lowest cost.

ILJIN was established in 1973 and has grown to be a world-class automotive component design and manufacturing company. We began our company as a forging supplier and further evolved into chassis and wheel bearing businesses. We have now expanded into powertrain and industrial bearings to meet the needs of the global marketplace.

ILJIN has expanded its R&D centers with a network connecting Korea, the U.S. and Germany. This network allows us to respond to our customers on a 24 hours 7 days a week real time basis. In addition, ILJIN concentrates its competencies toward the development of environmentally friendly, lightweight, fuel efficient, and EV focused components. Currently our company is also investing in new technologies in Railcar bearings and Aircraft landing gear bearings.

We have emerged as a progressive, quick-reacting company that continuously develops diversified products for new and existing markets. ILJIN is now one of the leading bearing companies in the world – driven by our business culture of "Creativity", "Teamwork", with a "Make it Happen" spirit.

ILJIN strives to be a world-class company prioritizing customer satisfaction based not only on creative thinking and innovative technologies, but through the passion and challenging spirit of the entire ILJIN team.

Thank you.

CEO/Chairman Sang Il Lee

A handwritten signature in black ink that reads "Sang Il Lee". The signature is fluid and cursive, with a distinct 'S' at the beginning and 'Lee' at the end.



Starting with the production of transmission gears and hot-forged automotive parts, ILJIN has developed technologies, taken on constant challenges, and played a major role in the production of wheel bearings and the development of steering and chassis parts.

Currently, we are supplying parts to automobile companies not only in Korea, but also in the USA, Europe, China, India, and so on, as ILJIN emerges as a global business.

ILJIN will continue moving forward to become synonymous with the world's best automotive parts by ensuring quality excellence, global cost competitiveness and technical competitiveness.

## Automotive Business

## Technology driven!

The world has become smaller as technology grows. ILJIN has become a leader in the automotive industry by driving our products towards improved safety and performance.



## Wheel Bearings

Wheel bearings are installed on automotive wheels, and are used to support axle loads and send power to the wheels. There are two basic types of wheel bearings : Ball(Double Row Angular Contact Ball Bearing) and Roller(Double Row Tapered Roller Bearing) for passenger cars through heavy truck applications, with integral ABS encoder and sensor technologies.

### Double Row Angular Contact Ball Bearing



Gen.1

### Double Row Tapered Roller Bearing



Gen.2



Gen.3

- Both driven and non-driven applications.
- Close tolerance between knuckle & hub.

- Non-Driven application.
- Good serviceability.

- Both Non-Driven/Driven application
- Integrated with hub and shaft
- Integrated with outboard inner race and hub shaft
- Minimized change in bearing clearance
- Excellent serviceability

# Chassis & Suspension

Chassis & Suspension components are designed to connect the body of the automobile to the wheels. These parts help maintain proper strength, and absorb road impact to enhance comfort. Additionally, Chassis & Suspension enhance the vehicle's handling characteristics and make it easier to control the vehicle when external/internal forces are applied on road wheels (e.g., driving, braking or steering).



## Lightweight Lower Control Arm

- LCA (Lower Control Arm) is a suspension component installed between knuckle and body (cross member) and is used to keep wheels aligned in all positions.



## Corner Module

- This is an assembly of wheel components in the vehicle front axle assembly. It is connected to the knuckle, hub assembly, disk, caliper and various links, and supports driving, steering and suspension functions.



## Upper Control Arm

- UCA (Upper Control Arm) is a suspension component installed between knuckle and body and is used to keep wheels aligned in all positions.



## Ball Joint

- Ball joint connects the steering knuckle to the control arm, allowing it up-and-down/rotational movement. It is installed on the steering knuckle or the control arm.



## CABJ

- CABJ (Cross Axis Ball Joint) is installed on Knuckle or Arm, and allows the wheels' articulation(up/down).



## Hybrid Ball Joint/CABJ

- Hybrid Ball Joint/CABJ is installed on Knuckle or Arm and allows the wheels' articulation (up/down). It is effective in enhancing lateral stiffness and alignment of chassis.



## Tie Rod End

- Tie Rod End connects the steering gear box and the steering knuckle. It allows up-and-down/steering movement of the stabilizer



## Stabilizer Link

- Stabilizer Link is designed to minimize roll angle so that riding performance improves. Installed at the end of the stabilizer, it allows up-and-down movement of the stabilizer.



## Door Checker

- This assembly is designed to improve opening/closing performance of doors for better safety. It distributes loads and thereby prevents accidental opening/closing of the automobile's doors.

# Powertrain

Powertrain comprises of bearings used for automotive transmission and axle: these include tapered roller bearings, angular contact ball bearings, and deep groove ball bearings. These bearings support radial directional / axial loads generated by gears and withstand lubricant contaminants.



## Double Row Angular Contact Ball Bearing with Flange

- The Double Row Angular Contact Ball Bearing with Flange is a flange type bearing that supports both axial, radial and moment loads.



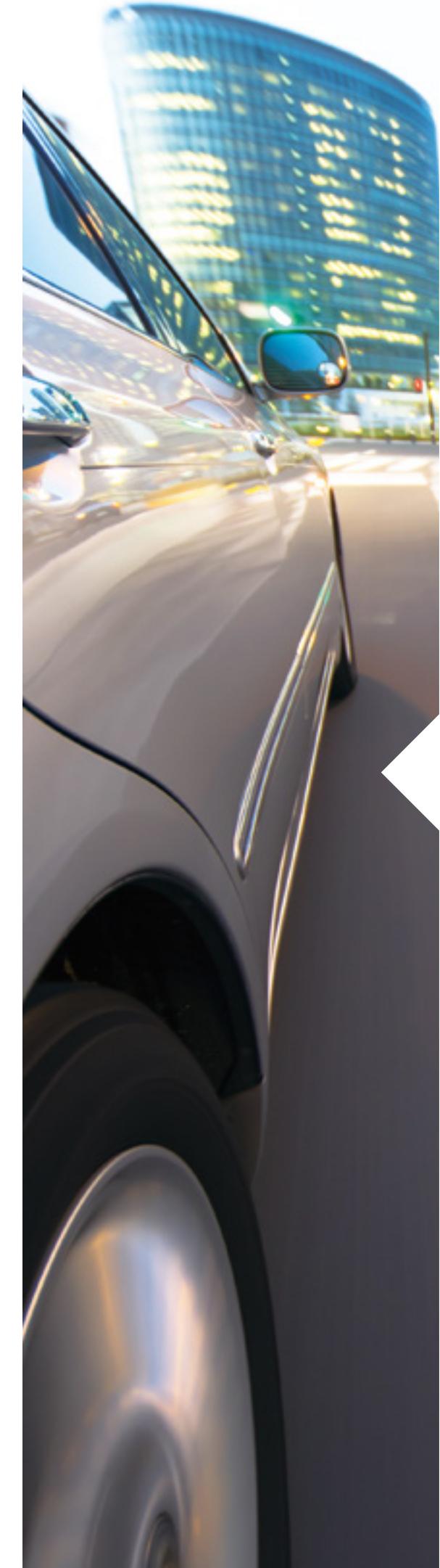
## Single Row Tapered Roller Bearing with Plastic Cage

- The Single Row Tapered Roller Bearing with Plastic Cage is a single taper rolling bearing with plastic cage. It is applied to the output shaft and differential and it supports one side of axial, radial and moment loads.
  - Realization of low torque for improving fuel efficiency
  - Optimized design for low noise and weight reduce
  - Improved bearing life under contaminated environment from the special heat treatment application.



## Single Row Tapered Roller Bearing with Steel Cage

- The Single Row Tapered Roller Bearing with Steel Cage is applied to the output shaft and differential. It supports one side of axial, radial and moment loads.
  - Optimized design for longer life and high load.
  - Improved bearing life under contaminated environment from the special heat treatment application.





# Industrial Business

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ILJIN BEARING not only offers the bearings currently in demand in the industry. We strive to add value through our ongoing efforts to design globally competitive bearings for every application, using advanced equipment and methods. ILJIN BEARING creates future value for our customers, rolling out cutting edge solutions through continuous advanced research. ILJIN strives to provide the best quality and services not only in our bearings range for vehicles but also in construction machinery, heavy equipment, railroad cars, reducer of industry, steel manufacture, wind power and defense industry among others.

# Industrial Bearings

ILJIN is committed to providing world class quality products for our customers.



## Taper Roller Bearing (TRB)

- TRB's are used in many industrial applications including gear boxes, construction equipment, farm equipment, and mining.



## Angular Contact Ball Bearing (ACBB)

- Angular contact ball bearings are used in excavator travel reducers. They are usually mounted in a group of two or more opposing preloaded units and are designed to carry combined loads, in both axial and radial directions. They are also applied to general machinery and industrial equipment.



## Slewing Bearing

**[Pitch Bearing]** Pitch bearing connects the blade (wing) with the hub which is rotated by wind. It also rotates the angle of each wing.

**[Yaw Bearing]** The yaw bearing connects the nacelle (wind-turbine body) to the tower supporting it.



## Railway Bearing

- Railroad car axle bearings ensure a smooth ride reducing the frictional resistance to the rotation axis of the rail. These highly convenient bearings have a simple structure and are easy to maintain and reduce friction, which increases fuel economy. They are self contained, pre-greased, sealed and pre-adjusted.



**Heading into the future!**

We have a bright future because we continuously invest in innovation.



# New Value R&D

## R&D center

Our R&D centers continuously focus on improving our design, analysis, prototyping, testing, and processing technologies. This allows us to optimize designs and manufacture at lower costs with short lead times to achieve high competitiveness globally.



## ILJIN R&D creates value for our customers

ILJIN makes large investments in R&D to provide the best products for our customers. We have adopted the most advanced research technologies and employed highly talented employees to create customer satisfaction.

Our R&D focuses on creative new solutions that help our customers achieve their targets.

In automotive, we are reducing friction in seals, using new mechanisms to reduce weight, and downsizing designs - all to improve fuel economy, CO<sub>2</sub> emissions and overall performance.



In addition, we design based on customers' needs through design and automated analysis simulations, while ensuring high product quality with low manufacturing cycle times for maximizing customers' satisfaction.



## Advanced R&D

Our advanced R&D develops high technology & high value products, including bearings for automotive, construction machinery, railways. We test and measure rolling fatigue in our bearings and assess maintenance in all external environments.

## Chassis R&D

Our chassis R&D provides the best designs to satisfying customers' needs using computer simulations to reduce costs, guarantee quality and minimize manufacturing cycle times. In addition, we focus on lightening products' weights and developing products integrating electronics, while developing hybrid, carbon and glass fiber chassis parts.



IMS is also implemented into our manufacturing process. These processes are driven and shaped by the core principles surrounding IMS. Building on these principles has allowed us to develop and refine leading manufacturing processes. The results of these processes are world-class products serving automotive and industrial markets.

Our IMS had yielded favorable results which are proven through customer awards and certifications. With our culture of continuous improvement focused on ethical and sustainable principles, ILJIN will ensure a path of global growth and continued customer satisfaction.



## World Class

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# Quality

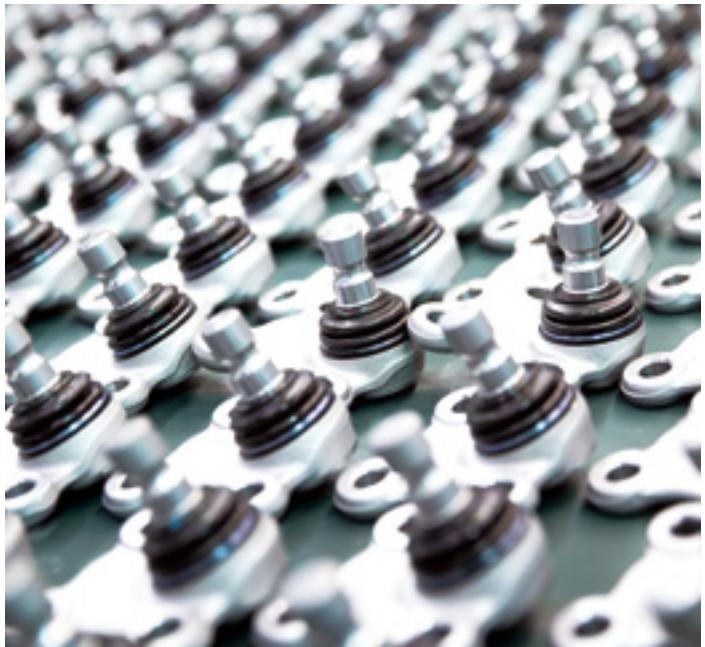
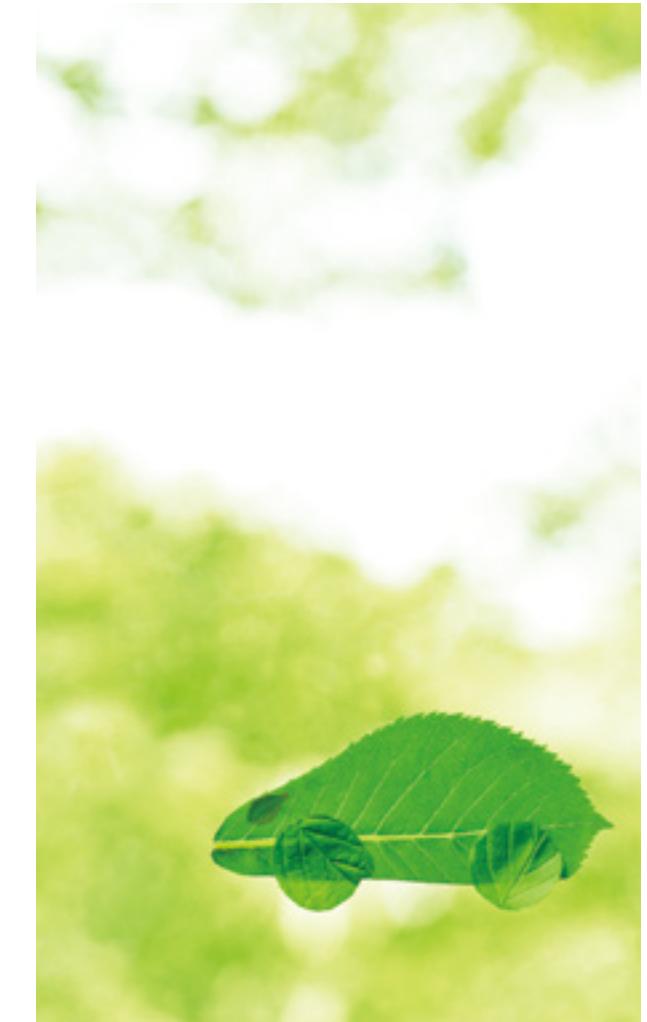
### ILJIN's global approach to consistent high quality

ILJIN is able to provide world-class and cutting-edge products through its implementation of IMS (ILJIN Management System) at all global locations. Through IMS the principles of transparency, simplicity, quick response, and sustainability are our main focus. Our system fosters and promotes a unique company culture, creativity, make it happen, and responsibility throughout all business functions. Combined with customer driven certifications, IMS gives ILJIN a competitive advantage in serving customers globally.





20/21



## Creating innovative technology to ensure a sound environmental future

ILJIN cares about the environment. Because all raw materials are derived from the environment, ILJIN knows that environmental care and a profitable business must go hand-in-hand. ILJIN locations hold ISO 14001 certification. This certification strictly ensures

that our business operates in an environmentally friendly manner.

Our locations also work with the surrounding local environment in mind. We operate under all local laws and ordinances in order to positively impact our direct surroundings. With each step forward in technology, our processes become more refined and environmentally friendly.

ILJIN recognizes its social and environmental responsibilities globally and works to perform above

and beyond all expectations.

**ECO** **Friendly**





We work for the future rather than for convenience.

We strive to produce products & solutions that enhance our every day lives.

Our future is based on technologies that are environmentally friendly.

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**ILJIN is a global leader.**

Customer focused

Technology focused

Environment focused

ILJIN Global technologies advancing excellence in the world.