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Ball Bearings Production Business.

Deep Groove Ball Bearings and Roller Bearings Manufacturing Industry

Introduction

Deep groove ball bearings are the most common type of ball bearing. They are commonly used in electric motors and in household appliances, car motors, office machinery, automation control, and garden and household tools. They have deep raceway grooves and their race dimensions are close to the dimensions of the balls that run inside.

Deep groove ball bearings come in many sizes, materials and varieties according to consumer needs, including special industrial uses such as high-temperature applications. High-temperature bearings are made to withstand temperatures up to 350°C (660°F) and are suitable for machines used in the metals industry or for industrial ovens.

Deep groove ball bearings are among the most widely used type of bearing in the world. They can operate at high speeds and can carry radial and (limited) axial loads. They are commonly used in electric motors, compressors, fans, and conveyors.

Deep Groove Ball Bearing is a common type of bearings and it is used in several industries from heavy machinery to high precision apparatus. This type of bearings consists of four elements that include inner ring, outer ring, cage that holds balls and ball bearings. Because of the flat surface on outer ring and inner ring, Deep Groove Ball Bearings provides a larger area of contact that delivers high performance and high load capacity. Although Deep Groove Ball Bearings come in hundreds of models and sizes with different design and even different material used in inner ring, outer ring and the cage but basically they are categorized in 4 main sections.

Applications:

- **Electric Motors**

For electric motor manufacturers and those involved with the refurbishment of motors, deep groove ball bearings will be a familiar sight. Not every motor, however, is the same and selecting the right bearing can make a big difference.

- **Electrical Goods**

From photocopiers to washing machines, deep groove ball bearings are an important component. In many instances their specification is critical

- **General Machinery**

Compressors, pumps, gearboxes and fans are amongst the many other machines that are reliant on deep groove ball bearings. In each case, however, the demands on the bearing may be very different.

Many industries benefit from the use of Deep Groove Ball Bearings:

- **Agricultural**
- **Food Processing**
- **Machine Tool**
- **Material Handling**
- **Medical / Pharmaceutical**
- **Printing**
- **Railway and Transportation**
- **Wind Energy**

Roller Bearings

Roller bearings — also known as rolling-element bearings — are similar to ball bearings in that they are designed to carry a load while minimizing friction.

Roller bearings come in a wide range of shapes and sizes, and can be customized for specialized situations. Also, the use of flanges, cages, and multiple bearing rows can allow for higher performance to meet specific application needs.

Roller bearings extend the working life of wheels, pulleys, fans, pumps, compressors, and other rotating parts by reducing friction and enabling parts to move smoothly. They have a wide, flat bearing to provide stability in high-speed applications with high radial loads. Radial loads exert force across the diameter (radius) of the shaft, such as those exerted by the load supported by a pulley or wheel.

Tapered roller bearings, cylindrical bearings, and combination bearings support axial and radial loads, such as those encountered on vehicle axels where there force is both through the wheel and along the wheel axis. Needle roller bearings support high speed, high radial loads in confined spaces. Spherical roller bearings support heavy shock loads where misalignment is a risk, such as wind turbines, pumps, paper processing, and fans. Tapered roller bearing cones and cups support high radial and axial loads and are used for such things as axels and gear boxes.

Roller Bearing Types and Applications

There are thousands of different types of roller bearings available to meet specific application requirements. Emerson Bearing offers a broad selection of roller bearings, including the following popular types:

- **Cylindrical Roller Bearings**

These bearings feature rollers that are longer than their diameter, and can tolerate higher loads than ball bearings. Our cylindrical roller bearings can carry heavy radial loads and are able to be used in high-speed applications.

- **Needle Roller Bearings**

This type of bearing is thinner than conventional roller bearings and can be designed with or without an inner ring. Needle roller bearings are ideal for dealing with radial space constraints in heavy-load, high-speed applications. Drawn cup styles allow for high load capacities and large grease reservoirs while still offering a slim cross-section design. These bearings are offered with inch or metric seals.

- **Spherical Roller Bearings**

These can carry heavy loads even when dealing with misalignment and shaft deflection. They can be designed to have cylindrical or tapered bores for mounting with or without a sleeve adapter. Available with various internal clearances and retainer options, spherical roller bearings can handle axial loading in either direction as well as heavy shock loads. These bearings are available in bore dimensions ranging from 20 mm to 900 mm.

- **Taper Roller Bearings**

These bearings can support radial and thrust loads. They can only handle unidirectional axial loads, so a second laterally reversed bearing is required for counter stay. Taper roller bearings are available in inch and metric sizes.

Roller bearings are used in a wide range of applications, from heavy equipment and machinery to power generation, manufacturing, and aerospace.

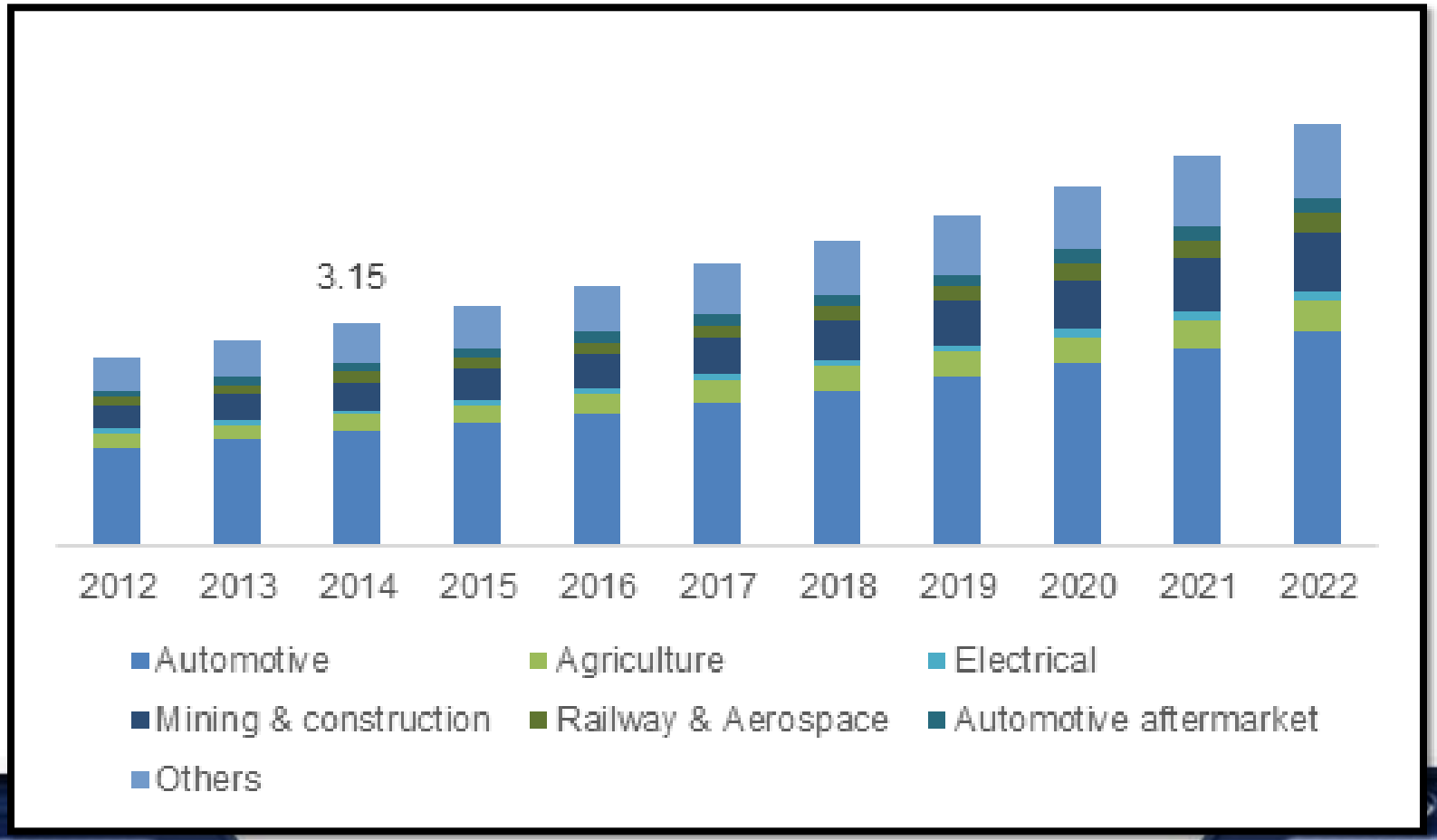
Market Outlook

Indian Bearing Industry

The automobile industry is the largest user segment for Indian bearing market accounting for almost 45% of total demand. The engineering sector is the second largest user segment for Indian bearing market accounting for 28% of bearing sales.

The Indian bearing industry is estimated at Rs30bn. The Industry has established a highly diversified product range of around 1000 types of bearings, having high volume demand. The domestic industry caters to almost 70% of total demand for common varieties and sizes of bearings. The remaining demand to the tune of 30% is being imported, essentially for industrial applications and special purpose.

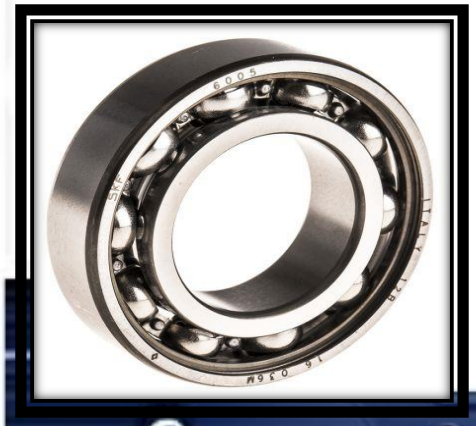
India Bearings Market size, by application, 2012-2022 (USD Billion)



The bearing market in India is divided into mainly two categories mainly organized sector and unorganized sector. However production techniques used in both the sectors is different. With the advancement in technologies organized sector is mainly using advanced technologies for production and on the other hand unorganized sector or small scale industries are still sticking to old methods of production.

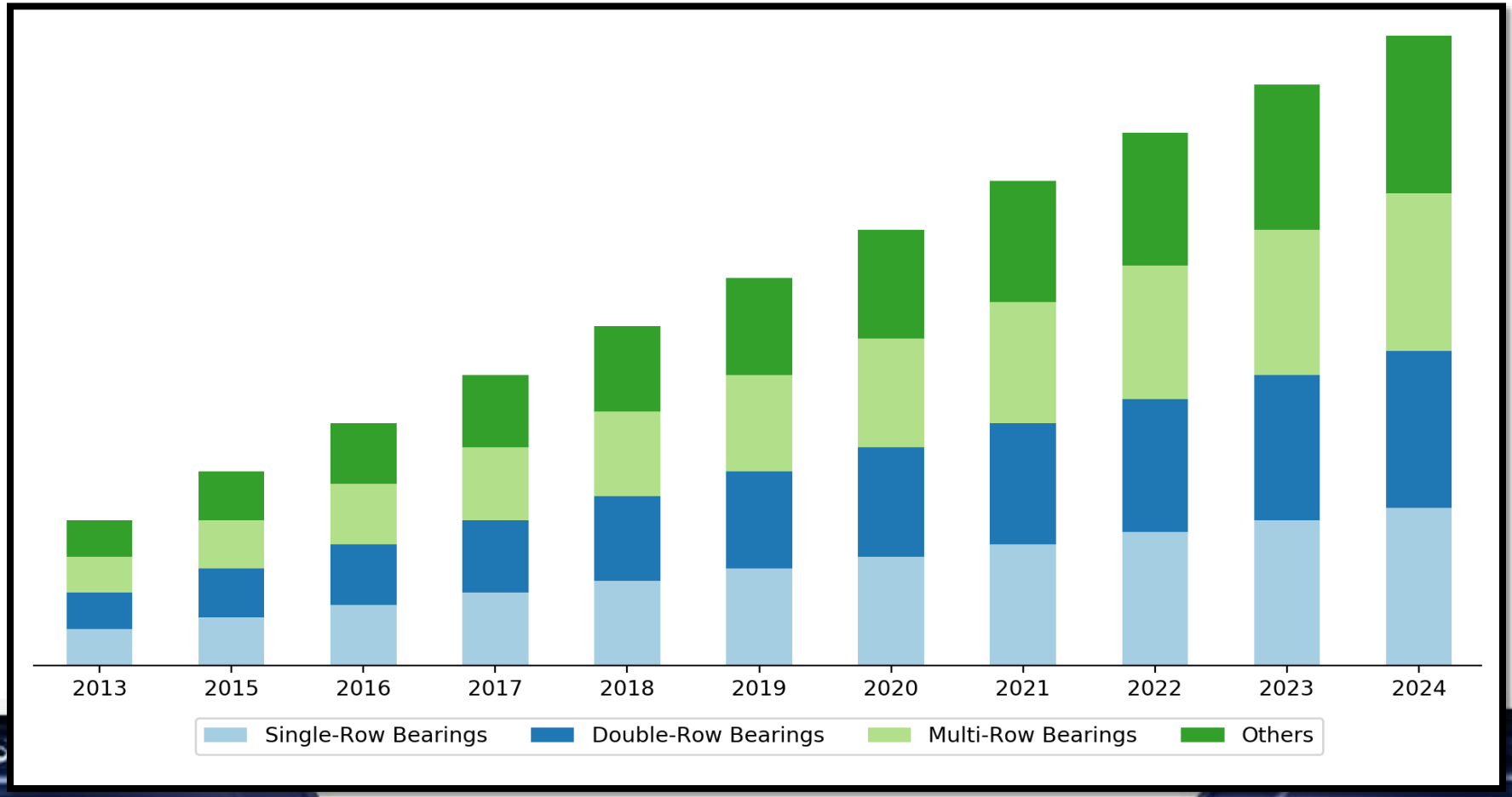
Global Bearings Market

The global bearings market size was valued at USD 102.2 billion in 2018 is anticipated to expand at a CAGR of 9.1% from 2019 to 2025. Bearings are virtually used in every kind of equipment or machinery, ranging from automobile parts, farm equipment, and household appliances to defense and aerospace equipment. This factor is projected to drive the market growth in near future. There has been a rising demand for bearings with lower maintenance requirements, higher efficiency, and longer service life.



Moreover, rise in demand for specialized bearing solutions that meet different industry specific requirements and challenges is projected to boost the market. For instance, rising application of high capacity products in wind turbines is expected to catapult the demand. Wind turbines utilize these products to enhance turbine performance and reliability, increase energy production, and reduce lubricant consumption.

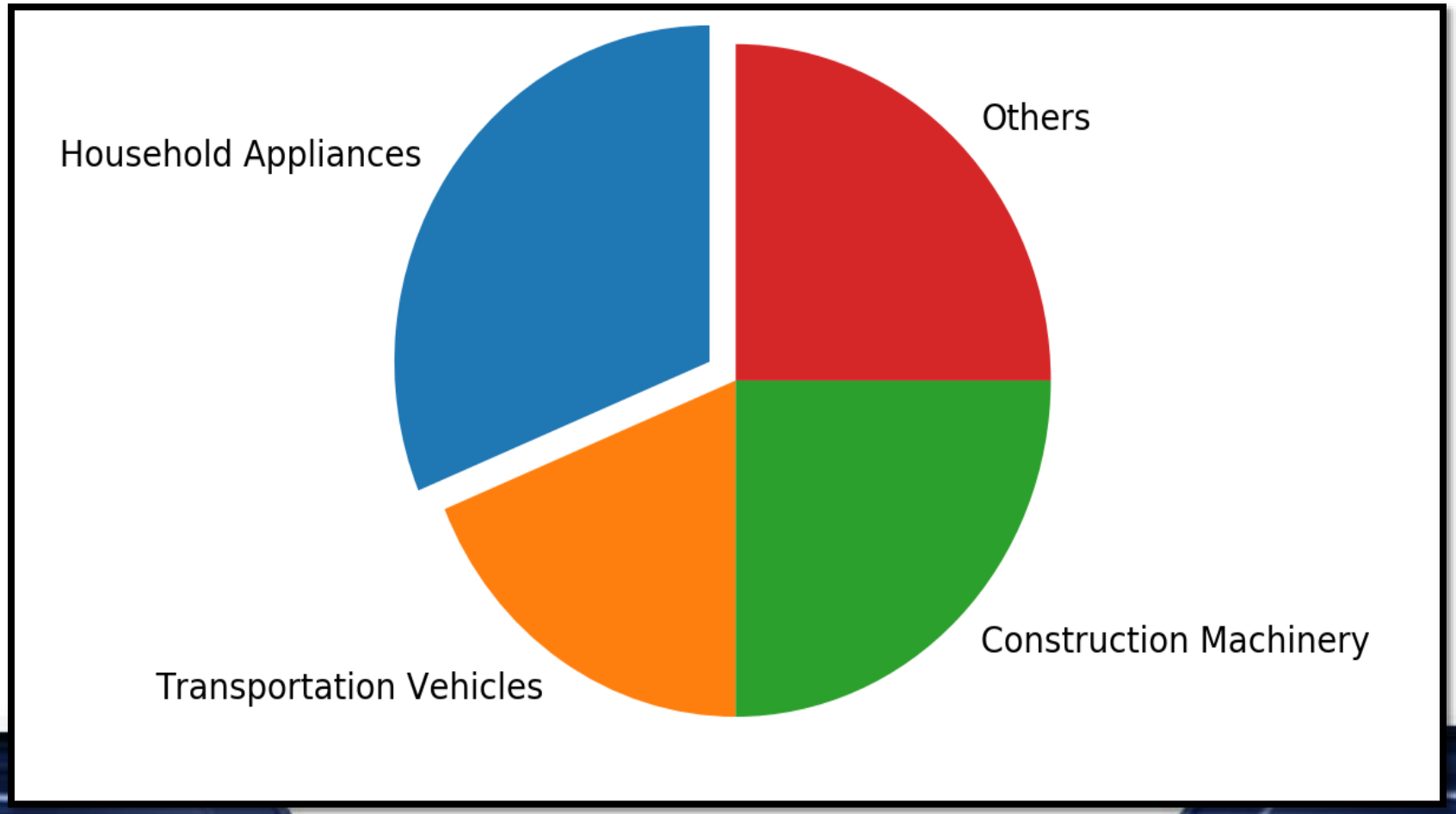
Global Deep- Groove Ball Bearing Market Size, By Product, 2013-2024 (USD Million)



The global bearings market is driven by increase in the demand for bearings in the automotive industry, as the implementation of bearings helps reduce wear and tear caused by friction. The manufacturing industry exhibits the highest demand for bearings. Moreover, ongoing developments in the automotive sector is a major factor that fuels the adoption of bearings in the global market. The adoption of bearings is the highest among automotive industries in countries in the Asia-Pacific region such as India, China, Japan, and South Korea. This trend is expected to significantly supplement the bearings market growth due to rapid mechanization.

The global bearings market is segmented based on bearing type, bearing outer diameter, application, and geography. The global bearings market is segmented, based on bearing type, into ball bearings, plain bearings, and others. Ball bearings market is further classified into deep groove ball bearings (open and sealed) and others (angular, contact, and thrust). The market is segmented based on the outer diameter of the ball bearings, into below 5mm, 6-10mm, 10-21mm, 22mm, 23-32mm, 33-40mm, 41-45mm, and others (>45mm). The application areas of the market are automotive, electrical, agriculture, mining & construction, railway & aerospace, and others. The market is analyzed based on four regions, which include North America, Europe, Asia-Pacific, and Latin America, Middle East, and Africa (LAMEA).

Global Deep-Groove Ball Bearing Market, By Application, 2019 (%)



The key companies in the deep groove ball bearings market include Schaffler, SKF, Timken Company, JTEKT, NSK Ltd. and NTN Corporation. Other players are Aurora Bearing, AST Bearings LLC, FYH Bearing, Baltic Bearing Company and Precision Bearings Pvt. Ltd.

Increase in usage of heavy machinery in the construction industry and high demand for application specific bearings drive the market. Rise in investment projects in mining, infrastructure development, and transport infrastructure development fuel the growth of the market. Moreover, increase in number of offshore wind farms results in greater adoption of roller bearings. However, roller bearings incur high installation costs and complex maintenance operations are few factors that are expected to hamper the growth of the market.

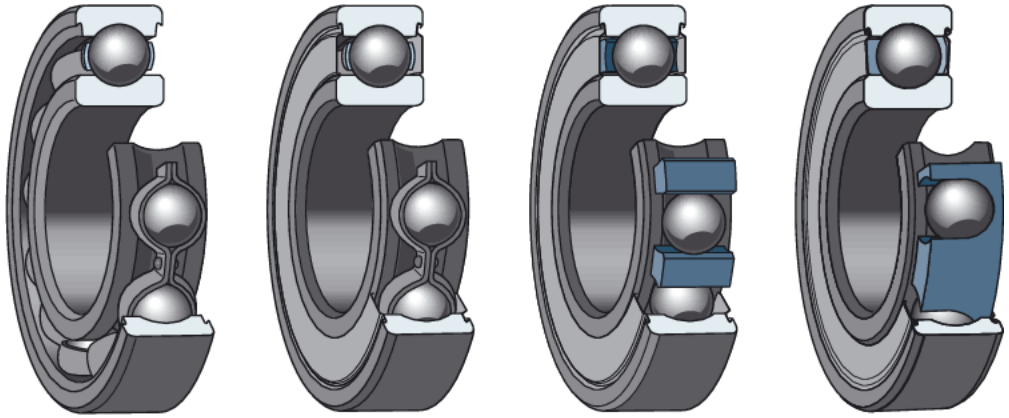
The global roller bearings market is segmented on the basis of product type, end-user industry, and geography. On the basis of product type, the market is classified into tapered, needle, spherical, cylindrical, and thrust. Based on the end-user industry, the market is divided into electrical, automotive, agriculture, construction, energy & power, and others (general engineering, aerospace). By geography, the market is analyzed North America, Asia-Pacific, Europe, and LAMEA.

There are several types of bearings, such as ball bearings, roller bearings, and plain bearings. Technological advances and the growing need to address energy efficiency in many applications result in the continuous improvement of bearing designs.

The prospects for the growth of the bearings market is, therefore, closely linked to the growth in the production of high-performance industrial equipment and machinery. Economic growth, increase in manufacturing, construction activities, energy demand, and rising personal income levels are the main factors leading to the expansion of durable goods production and bearing-reliant applications.

Other factors driving the growth of this market include growth in the global automotive industry, rising demand from the renewable energy sector, and increasing demand for light-weight bearings for various applications. Growing demand from emerging economies, and technological advancements are factors expected to provide numerous growth opportunities in the coming years.

The key players operating in the global roller bearings industry are NTN Corp., SKF AB, Brammer, NBI Bearings, RCB Bearing, Timken, Schaeffler AG, NSK Ltd., C&U Group, and JTEKT Corporation.



Major Queries/Questions Answered in the Report?

1. What is Deep Groove Ball Bearings and Roller Bearings Manufacturing industry ?

2. How has the Deep Groove Ball Bearings and Roller Bearings Manufacturing industry performed so far and how will it perform in the coming years ?

3. What is the Project Feasibility of Deep Groove Ball Bearings and Roller Bearings Manufacturing Plant ?

4. What are the requirements of Working Capital for setting up Deep Groove Ball Bearings and Roller Bearings Manufacturing plant ?

5. What is the structure of the Deep Groove Ball Bearings and Roller Bearings Manufacturing Business and who are the key/major players ?

6. What is the total project cost for setting up Deep Groove Ball Bearings and Roller Bearings Manufacturing Business?

7. What are the operating costs for setting up Deep Groove Ball Bearings and Roller Bearings Manufacturing plant ?

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11. Who are the Suppliers and Manufacturers of Raw materials for setting up Deep Groove Ball Bearings and Roller Bearings Manufacturing Business?

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23. What are the Profitability Ratios of Deep Groove Ball Bearings and Roller Bearings Manufacturing Project?

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Tags

#Deep_Groove_Ball_Bearings_and_Roller_Bearings, #Bearings_Manufacturing, #Ball_Bearings_Production_Process, #Manufacturing_Process_of_Deep_Groove_Ball_Bearings, #Ball_Bearing, #Deep_Groove_Ball_Bearings, #Ball_Bearing_and_Roller_Bearing_Manufacturing_Process, #Manufacture_of_Deep_Groove_Ball_Bearings, Bearing Manufacturing Process Flow Chart, Bearing Manufacturing Process Pdf, Roller Bearing, Bearing Manufacturing Project Report, Ball Bearing Manufacture, Deep Groove Ball Bearing Manufacturing, Deep Groove Ball Bearing Application, #Deep_Groove_Ball_Bearing_Factory, Ball Bearings Production, Ball Bearing Manufacturing Process, Roller Bearing Manufacturing Process, Bearings Manufacturing, Ball and Roller Bearing Manufacturing, Bearings Manufacturing Process, Ball & Roller Bearing, #Detailed_Project_Report_on_Deep_Groove_Ball_Bearings_and_Roller_Bearings, Project Report on Deep Groove Ball Bearings and Roller Bearings, Pre-Investment Feasibility Study on Deep Groove Ball Bearings and Roller Bearings, Techno-Economic feasibility study on Deep Groove Ball Bearings and Roller Bearings, Feasibility report on Deep Groove Ball Bearings and Roller Bearings, Free Project Profile on Deep Groove Ball Bearings and Roller Bearings, Project profile on Deep Groove Ball Bearings and Roller Bearings, Download free project profile on Deep Groove Ball Bearings and Roller Bearings

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Contact us

NIIR PROJECT CONSULTANCY SERVICES

106-E, Kamla Nagar, Opp. Spark Mall,

New Delhi-110007, India.

Email: npcs.ei@gmail.com , info@entrepreneurindia.co

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

Mobile: +91-9811043595

Fax: +91-11-23845886

Website : www.entrepreneurindia.co , www.niir.org

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