

## Introduction of pamphlets and catalogs

### Bearings

#### 1) General Bearings

##### Large size ball & roller bearings

(CAT.NO.B2002E)

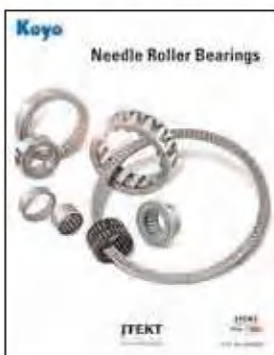


This catalog provides information on various large size ball and roller bearings for purposes such as steel making equipment, equipment for wind-power generation, civil engineering and construction machinery, and other large industrial machineries.

It contains large size bearings with bore diameter of 100 mm or more.

##### Needle roller bearings

(CAT.NO.B2020E)



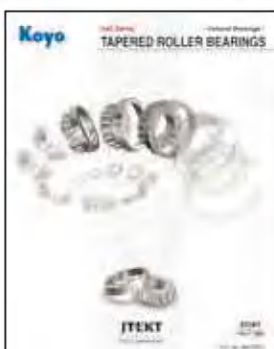
More useful catalog of needle roller bearings as the Koyo brand.

##### The products published to the catalog

- Radial needle roller and cage assemblies
- Drawn cup needle roller bearings
- Drawn cup roller clutches
- Heavy-duty needle roller bearings
- Track rollers
- Thrust bearings, assemblies, washers
- Combined needle roller bearings
- Needle rollers, accessories

##### Inch series tapered roller bearings

(CAT.NO.B2009E)



This is the special catalog for tapered roller bearings containing frequently used series in addition to the products included in the "Ball & Roller Bearings" catalog (CAT.NO.B2001E), for improvement in the contents and easier reference.

## EXSEV BEARINGS AND CERAMIC BEARINGS

(CAT.NO.B2004E)

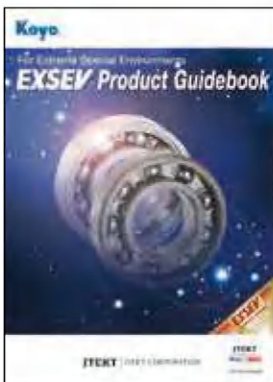


Suitable for use in special environments, such as clean room, vacuum, high-temperature, or chemical.

Available in sizes of 4 mm to 40 mm bearing bore.

## EXSEV product guidebook

(CAT.NO.B1005E)

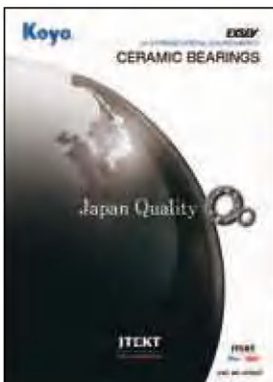


This is a summarized version of EXSEV BEARINGS AND CERAMIC BEARINGS FOR EXTREME SPECIAL ENVIRONMENTS (Cat. No.B2004E).

Please utilize this guidebook when selecting bearings.

## CERAMIC BEARINGS

(CAT.NO.B1013E)



This pamphlet is targeting and introducing ceramic bearings.

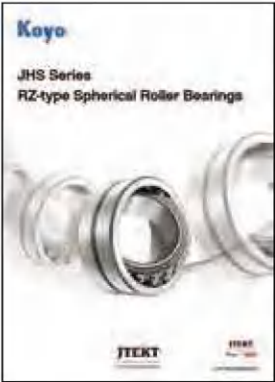
For the easy selection, this pamphlet is introducing ceramic bearings at each use.

The following contents are included in this pamphlet:

- Ceramics Production Processes
- Properties of ceramic materials
- Features

## Introduction of pamphlets and catalogs

### JHS series RZ-type spherical roller bearings (CAT.NO.B2023E)



This pamphlet introduces our "JHS Series" RZ-type Spherical Roller Bearings, which are a new generation of high-performance bearings made possible with advanced designs and processing technologies. In addition to introducing the JHS Series, this pamphlet will also explain the features and structures of JHS Series RZ-type Spherical Roller Bearings.



## 2) Products for Steel Production Equipment

### High-performance product series for steel production/rolling equipment

(CAT.NO.B1001E)



In this pamphlet, we will introduce high-performance products (bearings, drive shafts, and oil seals) that contribute to stable operations of steel production equipment.

This pamphlet contains two parts: an overall introduction and product introduction.

#### Products to be introduced include the following

- Bearings for roll necks
- Drive shafts for rolling mills
- Bearings for backing shafts of cluster mills
- Products for continuous casting machines

### Cylindrical roller bearings for multi-roll mill backup rolls

(CAT.NO.B2012E)



Special designed bearings for multi-roll mill backup rolls.

The outer ring is made of special material and is heat-treated for surface hardness to ensure impact resistance, and thus reliability. In addition, JHS210 bearings meet the needs of our customers for long service lives. This catalog provides information on the handling of the bearings (key points for the disassembling and inspecting of the bearings) as well as actual examples of bearing failures and countermeasures.

### Roll neck bearings for rolling mill

(CAT.NO.B2013E)



This bearing is used for rolling mill roll necks.

This catalog includes data about countermeasures for damages particular to this application as well as dimensions tables.

## Introduction of pamphlets and catalogs

### Drive shafts for steel production/industrial equipment

(CAT.NO.B2021E)



Drive shafts for steel production/industrial equipment are included in this catalog.

Products line up, handling explanation cases of failures, technical data that includes selection criteria for each application are shown in this catalog.

Also, specifications, product introduction (phase adjustment, hyper coupling), etc are shown in this catalog.

This catalog can widely be used for from drive shaft selection to maintenance.

### Oil seal for steel production equipment

(CAT.NO.B1020E)



This pamphlet introduces oil seals that are used in steel production equipment.

This pamphlet includes features and other information on products used in the following equipment:

- Rolling Mill
- Continuous Casting Machines
- Sintering Machine Pallet Cars and Converter Furnaces

### JHS series hyper coupling

(CAT.NO.B1010E)



The hyper coupling is a torque limiter (cut-off device) that protects drive systems for heavy loads.

This catalog will show you operating principles, features of the products, examples of the applications, and the product lineup.

3) General Industrial equipment

New ceramic ball bearings for electric motors

(CAT.NO.B1017E)



This pamphlet introduces our new ceramic ball bearings which have similar insulation properties to conventional ceramic ball bearings (silicon nitride), and their thermal expansion is close to that of steel ball bearings, so that there is very little change in clearance due to temperature.

Low-torque Long-life deep groove ball bearings for electric motors

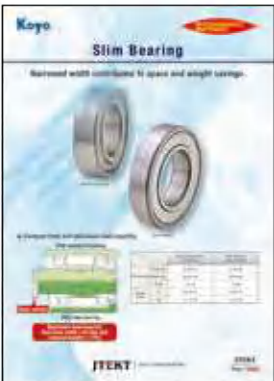
(CAT.NO.B1018E)



This pamphlet introduces our new deep groove ball bearings, with optimized grease composition which greatly reduces torque and extends service life, and also reduces energy consumption by the motor and contributes to reducing the need for maintenance.

Slim Bearing

(CAT.NO.B1021E)



This pamphlet introduces our slim bearings for which the seal groove width has been reduced by welding the shield directly to the outer ring instead of attaching the shield to the outer ring seal groove.



## Introduction of pamphlets and catalogs

### Motor-use Deep Groove Ball Bearings with Optimized Sound Output

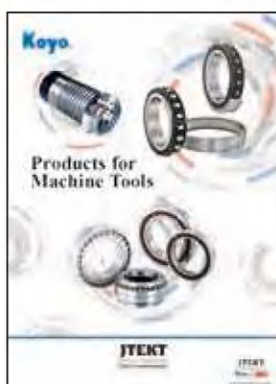
(CAT.NO.B1022E)



This pamphlet introduces our deep groove ball bearings for which sound from unpleasant frequencies to the human ear has been reduced by optimizing the inner raceway surface through the use of 3D analysis.

### Products for machine tools

(CAT.NO.B1016E)



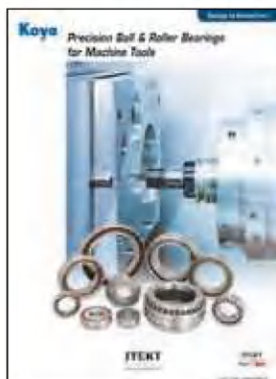
This pamphlet introduces JTEKT's products for machine tools.

Contents

- Changes in Spindle Technologies
- Introduction to High-ability NX Series  
(Ultra-high speed angular ball bearings and ultra-high speed cylindrical roller bearings)
- Introduction to bearings for spindle
- Introduction to ball screw-related products and spindle unit products
- Product line-up

### Precision ball & roller bearings for machine tools

(CAT.NO.B2005E)

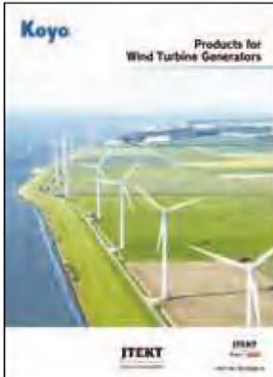


This catalog includes high precision products such as cylindrical roller bearings and angular contact ball bearings, that are used for spindles of machine tools, and support bearing for precision ball screws.

This catalog gives technical descriptions including references for handling of bearings such as the guideline for selection of bearing, example of bearing installation, and example of bearing failures.

## Products for Wind Turbine Generators

(CAT.NO.B1002E)



This catalog introduces main shaft bearings, gearbox bearings, and generator bearings for wind turbine generators. The catalog also includes main shaft oil seals, hydraulic pumps, and machine tools for large components of wind turbine generators.

## Product information for agricultural and construction equipment

(CAT.NO.B1009E)

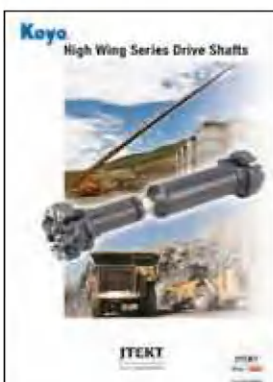


This catalog is introducing the function needed to an agricultural machine and a construction machine, our technology and goods.

- Optimum design technologies (High performance tapered roller bearing)
- Heat treatment technologies (KE bearing, SH bearing)
- Analysis technologies, Surface reforming technology
- JHS Series Spherical Roller Bearings
- Propeller shaft for construction machinery, Oil seal, Hydraulic Components

## High Wing Series Drive Shafts

(CAT.NO.B2022E)



Drive shafts for construction machinery/railway rolling stocks are included in this catalog.

Products line up, handling explanation, technical data that include cases of failures, specifications, etc are shown in this catalog.

This catalog can widely be used for from drive shaft selection to maintenance.



## Introduction of pamphlets and catalogs

### Bearings for Aerospace Applications

(CAT.NO.B1003JE)



This pamphlet introduces bearings that are used in airplanes and in space. The bearing usage locations and the airplane eras are gathered together and introduced in lists.

### Miniature One-way Clutch

(CAT.NO.B2024E)



Miniature one-way clutches are used in clutch systems in various machines, including office automation equipment, ATMs, and various ticket vending machines. This catalog also includes recommended polyacetal resin and steel housing dimensions.

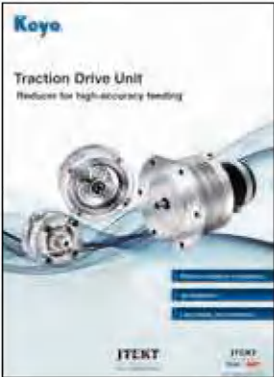
### Ball bearing units

(CAT.NO.B2007E)



This catalog has information about ball bearing units. Technical descriptions, selection of ball bearing units, and dimensional tables of units, such as pillow block type, take-up type, cartridge type, and ball bearing for units, are included in this catalog. Stainless-series and "compact" series are also included in this catalog.

**Traction drive unit**  
(CAT.NO.B1011E)



A Traction Drive Unit has been conceived from bearing core technologies. A reducer with a minimal rotation irregularity is suitable for high-accuracy feeding, which is unachievable by using gears.

**Oil seals & o-rings**  
(CAT.NO.R2001E)



This catalog includes oil seals, o-rings and back up rings. Includes dimensional tables, technical explanations and handling information.

## Introduction of pamphlets and catalogs

### 4) Automotive Components

#### The 3rd generation ball hub units

(CAT.NO.B1004E)



This pamphlet introduces the main characteristics and design of the 3rd generation ball type hub units.  
Features JTEKT's recommended hub unit numbers.

#### Tapered roller bearings for axle drive pinions

(CAT.NO.B1006E)



This pamphlet introduces tapered roller bearings for axle drive pinions.  
Technology for torque reduction and longer service life, examination and evaluation methods, and recommended series bearing numbers.





## Products introduction of JTEKT

### Bearings



■ Hub units



■ Clutch release bearings



■ Water pump bearings



■ Bearings for rocker arms



■ CPA bearings



■ LFT III bearings



■ KE bearings



■ Roll neck bearings for rolling mill  
(Steel production/rolling equipment)



■ Bearings for wind turbine generator



■ EXSEV & Ceramic bearings



■ Bearings for railway rolling stock axle  
journals



■ Drive shafts



## Products introduction of JTEKT



■ Bearings for machine tools



■ Bearings for aircraft/aerospace

## Automotive Components



■ Steering systems



■ TORSEN LSD



■ Intelligent torque controlled coupling (ITCC)



■ Drive shafts (CVJ)



■ Electric pumps for idle-stop system



■ Pump for CVT



■ Linear solenoid valve for AT and CVT



■ Damper pulleys

## Sensors



■ Water level meters



■ Pressure sensors/Transducers

## Products introduction of JTEKT

### Machine tools

#### [ Grinders ]



■ Grinding center TG4



■ Cam shaft grinder GC20Mi



■ Cylindrical grinder e300G

#### [ Machining Centers ]



■ Horizontal spindle machining center  
FH630SX-i



■ Vertical spindle machining center  
FV2090S



Mechatronics

■ Programmable controller



TOYOPUC-PC10G



TOYOPUC-Plus



■ Direct circuit monitor



■ Small safety PLC TOYOPUC-PCS-J

## Products introduction in Japan Group Companies

### Koyo Machine Industries Co., Ltd.



■ Centerless grinding machine



■ Surface grinding machine



■ Fully automatic assembly inspection system



■ Precision spindle unit



■ Drive shaft



■ Intermediate shafts



■ Ball screws



■ Indexing chuck

### Toyooki Kogyo Co., Ltd.

#### Energy-saving hydraulic equipment



■ Small pack



■ TOYOPAC"ECO"

#### Inspection and testing machine



■ High performance straightening machine

#### Automotive components



■ Reduced wiring 4 pin connector solenoid valve



■ Toyopac motion





Koyo Sealing Techno Co., Ltd.



Oil seals of various types



O-rings of various types



Functional parts of various types



Bonded piston seals for AT and CVT

CNK Co., Ltd.

Loader



DLC coating equipment



Round eddy-current coolant system



Heat treatment equipment



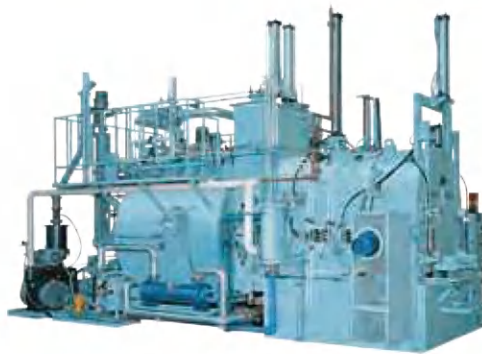


## Products introduction in Japan Group Companies

### Koyo Thermo Systems Co., Ltd.



■ Vacuum heat treatment furnace



■ Non-frame KCF carburizing and quenching furnaces



■ Vertical diffusion systems



■ Electronic device for continuous furnace



■ High temperature clean oven



■ Experimental small electric furnace

### Koyo Electronics Industries Co., Ltd.



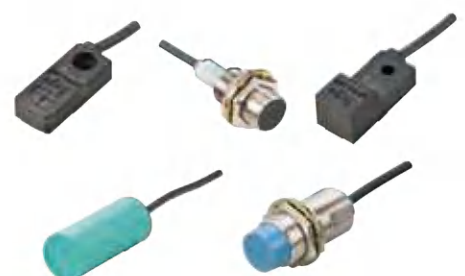
■ Rotary encoders



■ Programmable controllers



■ HMI



■ Proximity switch

HOUKO Co., Ltd



■ General purpose cylindrical grinders  
G32 series



■ CNC cylindrical grinders  
GE3/GL3S series



■ Production type Cylindrical grinders  
GL4E series



■ CNC large cylindrical grinders GE6 series

Toyoda Van Moppes Ltd.



■ Cam profile grinding vitrified wheel



■ Two-sided surface grinding, centerless grinding wheel



■ Rotary dressers



■ Diamond centers