

## Plummer Block Housing



SNJ

Supports bearings for radial and bidirectional axial loads, tolerating static and dynamic misalignment

- Increased mounting surface for higher stability and improved heat dissipation resulting in prolonged bearing life
- Quick and precise vertical alignment to the axis of the bore enabled by markings on both end faces of the housing foot
- Simple and safe assembly of the housing halves by dowel pins ensuring easy alignment and installation of heavy housings
- Available in a wide range of sizes and materials

**Applications:** Conveyors, blowers

## Ball Bearing Units



BU

For high-speed applications with moderate radial and bidirectional axial loads, tolerating static and dynamic misalignment

- Integrated housing to reduce surrounding components and simplify replacement procedure, therefore reducing installation time
- Smooth and quiet running properties
- Sealed, interchangeable, Anti-rotation pin on outer ring and set-screw for shaft fixation

**Applications:** Agricultural machines and devices, fitness equipment, packaging, air handler, fans

## Adapter Sleeves



H

For locating bearings with a tapered bore onto a cylindrical seat

- Permits an easy adjustment of the bearing clearance
- Simplified bearing mounting and dismounting
- Optional zinc phosphate coating is resistant to corrosion

**Applications:** Mounting on plain or stepped shafts

## Induction Heaters



NH

For bearing heating to facilitate shaft mounting

- Control over heating process time and temperature
- Automatic demagnetization
- Temperature setting up to 240°C / 464°F

**Applications:** Bearings, couplings, pulleys and gears

## Locating Rings



LR

For a fixed bearing seat

- Two locating rings are required for a fixed position – sold one piece per box

**Applications:** Plummer blocks

## Hydraulic Pullers



NP

For efficient and safe dismantling of bearings

- Integrated hydraulic pump and cylinder
- Self-centring, easily convertible between 2- and 3-arm puller
- Compact design

**Applications:** Mounted bearings, couplings, gears and pulleys

## Seals and End Covers



J

Prevent lubricant leakage and ingress of foreign particles

Numerous variants available for every area of application:

- 4-lip rubber seal
- V-ring
- Labyrinth seal
- Heavy-duty taconite seal
- Thermoplastic end cover

**Applications:** Plummer blocks

Housings and Accessories

Maintenance Tools

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**BEARINGS  
PORTFOLIO**



CELEBRATE THE POLE POSITION



**MADE IN JAPAN**

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## BEARINGS

Since 1939 NACHI has been developing and manufacturing rolling bearings with outstanding high quality.

Every detail in the process is controlled by NACHI – from steel production to heat treatment and machining of the components for the bearing assembly.

Today NACHI supplies a wide range of ball and roller bearings for all kinds of applications (machine tools, transmission, electric drives, cranes) and industries (aerospace, automotive, general).

### NACHI offers customers the highest possible flexibility

Vastly customisable design (geometries and materials) to suit customer requirements (incl. raceways/cage design, ring/ball/cage materials, etc.), as well as performance-enhancing heat treatments and coatings.

### From raw material to design, manufacturing and quality control

#### NACHI steel:

- ▶ Material specification
- ▶ Process specification
- ▶ Quality control

#### NACHI design:

- ▶ Internal geometry (raceways, cages, etc.)
- ▶ Seal
- ▶ Grease

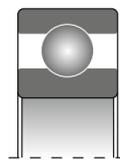
#### NACHI manufacturing:

- ▶ Process
- ▶ Quality control

### ALL MADE BY NACHI

### Radial Ball Bearings

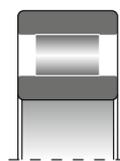
Balls transfer loads via point contact to the raceways and are best suited for high-speed applications.



Radial bearings mainly support loads perpendicular to a shaft.

### Radial Roller Bearings

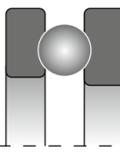
Rollers transfer the loads via line contact to the raceways and are best suited for high-load applications.



Radial bearings mainly support loads perpendicular to a shaft.

### Axial Ball Bearings

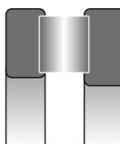
Balls transfer loads via point contact to the raceways and are best suited for high-speed applications.



Axial (thrust) bearings mainly support loads parallel to a shaft.

### Axial Roller Bearings

Rollers transfer the loads via line contact to the raceways and are best suited for high-load applications.



Axial (thrust) bearings mainly support loads parallel to a shaft.

### Deep Groove Ball Bearings >50mm Bore-Ø



DGBB

For high-speed applications with moderate radial and bidirectional axial loads

- ▶ Simplicity and accuracy make deep groove ball bearings the most versatile and widely used type of bearing, supplemented by numerous modification options to further increase versatility
- ▶ Smooth and quiet running properties

**Applications:** Machine tools, electric motors, pumps, fans, pulleys, transmissions, household appliances, engine accessories, power tools and conveyors

### Deep Groove Ball Bearings ≤50mm Bore-Ø



DGBB

- ▶ Superior heat-resistant rubber seals for enduring sealing performance up to 130°C
- ▶ NACHI Quest original high-performance grease doubles grease life even up to 150°C
- ▶ Saving cost and energy due to low power loss from low and stable running torque by new NACHI seal design

### High Speed Angular Contact Ball Bearings



ACBB

Super-precision bearings for high-speed applications with moderate axial loads

- ▶ Smaller ball size and optimum internal design reduce heat generation in high-speed operating conditions, while interchangeable with standard angular contact ball bearings
- ▶ NACHI's standard flush ground allows for easy mounting as no adjustment is needed for correct internal clearance or preload. Further, allowing reduction in stock variation and storage complexity while staying cost-effective
- ▶ Available with ceramic balls

**Applications:** Machining centres, grinding machines, high-frequency spindles, lathes and milling machines

### Angular Contact Ball Bearings



ACBB

For high-speed applications with high axial loads

- ▶ High accuracy allows for rapid acceleration and deceleration as well as smooth and quiet running properties
- ▶ NACHI's standard flush ground allows for easy mounting as no adjustment is needed for correct internal clearance or preload. Further, allowing reduction in stock variation and storage complexity while staying cost-effective

**Applications:** Gearboxes, pumps, electric motors, machine tools and clutches, lathes, boring machinery, grinders, machining centres, milling machines, slicing machines, drilling machines and gem cutting machines

### Double Row Angular Contact Ball Bearings



ACBB

For high radial loads, bidirectional axial loads and moderate tilting moments

- ▶ Particularly suitable for compact bearing arrangements where easy assembly is required
- ▶ Contact angle options (20°/30°) to precisely match application requirements – improving performance and increasing bearing life

**Applications:** Pumps, engine accessories and power tools

### Self-Aligning Ball Bearings



SABB

For high-speed applications with light bidirectional axial loads, tolerating static and dynamic misalignment

- ▶ NACHI standard plastic cage enables low friction and low heat generation while reducing noise level and vibration under misaligned conditions
- ▶ Excellently suited to be combined with plummer block housings

**Applications:** Fans

### Magnetic Clutch Bearings

**No. 1 IN THE WORLD**



MCB

For high-speed applications with outer ring rotation, moderate radial and axial loads as well as tilting moments

- ▶ **Nr. 1 IN THE WORLD**
- ▶ NACHI has earned >50% market share in auto A/C pulleys due to a wide range of bearing internal designs, seals, cages and materials as well as special grease developments
- ▶ Thin cross-section bearing to satisfy unique inner to outer diameter ratio requirements

**Applications:** Automobile air-conditioners and other engine accessories

### 4 Point Contact Ball Bearings



4PCBB

For high-speed applications with high radial and bidirectional axial loads

VA/VE option as a replacement for:

- ▶ Tapered roller bearings to increase efficiency: ball contact is superior to roller contact
- ▶ Deep groove ball bearings to increase rigidity: Increased contact points reduce deflection and axial clearance as well as prolong bearing life
- ▶ Double row angular contact ball bearings to decrease size and achieve compact application design
- ▶ Superior one-piece inner ring for easy assembly

**Applications:** Engine accessories, household appliances, power tools, machine tools, electric motors, pumps, fans, pulleys, transmissions

### Cylindrical Roller Bearings



CRB

For high-speed applications with high radial loads

- ▶ NACHI standard plastic cage enables low friction and low heat generation while reducing noise levels
- ▶ Available with pressed steel, machined brass or polyamide cages

**Applications:** Electric motors, traction motors, railway stocks and transmission

### Tapered Roller Bearings



TRB

For high-speed applications with high radial and axial loads

- ▶ Separable and interchangeable components allow simple mounting, dismounting and maintenance
- ▶ Advanced inner ring rib design provides superior roller guidance for better efficiency
- ▶ The improved contact geometry enables low friction and reduces heat generation while decreasing noise levels and vibration

**Applications:** Industrial transmissions, automobile transmissions, automobile differential gears, automobile wheels and railway rolling stock

### Spherical Roller Bearings

**No. 1 IN THE WORLD**



SRB

For high radial and moderate bidirectional axial loads, tolerating static and dynamic misalignment

- ▶ **Nr. 1 IN THE WORLD**
- ▶ Maximising roller diameter, length and quantity in conjunction with an optimised roller/raceway profile, NACHI achieves the highest load ratings in the world
- ▶ NACHI additionally offers a vibration-resistant specification with increased cage strength and improved corrosion resistance

**Applications:** Industrial gearboxes, conveyors, blowers, steel and paper mills, mining, quarrying and construction machinery, pellet machines, crane industry, vibration screen and crushers

### Sheave Bearings



CRB

Full complement double row cylindrical roller bearings for high dynamic & static radial loads

- ▶ Unique design rubber contact seal with superior sealing capability
- ▶ Lithium soap-based grease with EP additives
- ▶ Available with superior corrosion-resistant chromate coating and low-temperature grease (-40°C)

**Applications:** Rope sheaves

### Double Row Cylindrical Roller Bearings



CRB

Super-precision bearings for high-speed applications with high radial loads

- ▶ The persistent accuracy and rigidity of NACHI double row cylindrical roller bearings enable high accuracy manufacturing processes and products
- ▶ Optional tapered bore allows radial internal clearance to be adjusted after mounting
- ▶ Meet high rigidity requirements of machine tool spindle applications when combined with super-precision angular contact thrust bearings

**Applications:** Lathes, machining centres and printing machines

### Thrust Ball Bearings



TBB

For uni- and bidirectional moderate axial loads

- ▶ Separable components are interchangeable, which facilitates mounting, dismounting and maintenance inspections
- ▶ Bearings with sphered housing washers permit angular misalignment between shaft and housing as well as accommodate misalignment between the support surfaces in the housing and on the shaft

**Applications:** Industrial fans, industrial pumps, industrial transmissions, mining, mineral processing and cement

### Ball Screw Support Bearings – TAB



BSSB

Super-precision bearings for high-speed applications with high radial and axial loads and high rigidity requirements

- ▶ Available with integrated (low torque) contact seal and non-contact seal for a compact machine design
- ▶ Saving cost and energy due to low power loss from low and stable running torque by new NACHI seal design
- ▶ Clearance is adjusted for combined bearing set in advance, achieving proper preload by only tightening a nut or cover and eliminating adjustment and torque measurement

**Applications:** Ball screw support in machine tools, high precision actuators in high-speed machines, precision measurement equipment and robots

### Ball Screw Support Bearings – TAF



BSSB

Super-precision bearings for high-speed applications with high radial and axial loads and high rigidity requirements

- ▶ Maximised load rating due to larger ball size while maintaining boundary dimensions as 73 series
- ▶ Clearance is adjusted for combined bearing set in advance, achieving proper preload by only tightening a nut or cover and eliminating adjustment and torque measurement
- ▶ VA/VE option as a replacement for spherical roller thrust bearings to improve efficiency

**Applications:** Injection moulding and machine tools

### Ball Screw Support Bearings – TAU



BSSB

Super-precision bearings for high-speed applications with high radial and axial loads and high rigidity requirements

- ▶ Integrated housing and outer ring design to reduce surrounding components and simplify replacement procedure, therefore reducing installation time
- ▶ Factory preset preload eliminates the adjustment of housing to further simplify installation procedure
- ▶ Saving cost and energy due to low power loss from low and stable running torque by new NACHI seal design

**Applications:** Ball screw support in machine tools, high precision actuators in high-speed machines, precision measurement equipment and robots

### Spherical Roller Thrust Bearings



SRTB

For high bidirectional axial and moderate radial loads, tolerating static and dynamic misalignment

- ▶ **Nr. 1 IN THE WORLD** – Maximising roller diameter, length and quantity in conjunction with an optimised roller/raceway profile, NACHI achieves the highest load ratings in the world
- ▶ NACHI developed R-shape steel cage design maximises lubrication flow – reducing heat generation and extending permissible speed
- ▶ NACHI standard heat stabilisation treatment allows for operating temperature up to 200°C with minimal dimensional changes

**Applications:** Injection moulding machines and vertical hollow shaft pumps, excavator, mill and crane hook