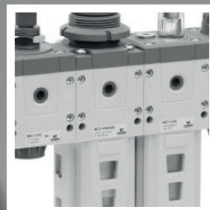
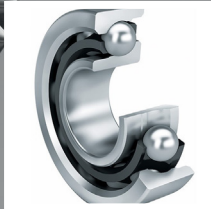


The Engineer's Tool Kit



BDL
INCORPORATING

FLUID POWER TECHNOLOGY



Established in 1996, Bearings and Drives has grown to be a leader in the supply and distribution of MRO products from the world's leading manufacturers including: Bearings, Power Transmission, Industrial Gearboxes, Motors, Tools & Consumables. Drawing on our experience of customer requirements products and services have been developed for all types of industry including Food, Paper, Recycling, Distribution, Quarrying and Plastics.

Due to the unpredictable nature of MRO spares demand, we offer single source supply which includes MANAGED INVENTORY SERVICES, which would, by streamlining your ordering process, REDUCE DOWNTIME and IMPROVE PRODUCTION EFFICIENCY therefore creating considerable COST SAVINGS.

Our REPAIR SERVICES cover Motors, Gearboxes & Pumps. Available 24/7 our team of highly skillful engineers is on hand to deliver advise and engineering solutions. We also offer a free collection and delivery service.

FLUID POWER

In 2009, and with many industries relying on Fluid Power in their manufacturing processes, our sister company FLUID POWER TECHNOLOGY was established and it has grown to not only carry large stocks of, FRL's, Solenoid Valves, Mechanical Valves, Metal & Plastic Fittings but also, due to the indepth knowledge and expertise of our staff, we are able to offer Product Interchange, System Advice and Bespoke Solutions to specific requirements, these being our Unique Selling Points, set us apart from the competition.

However large or small the requirement, however simple or complex the problem, both BEARINGS & DRIVES and FLUID POWER TECHNOLOGY prides themselves on meeting your requirement with on time, on budget solution and supply.



**Emergency Call Out
Service 24 hours a
day 7 days a week
365 days a year**



We pioneer motion

The best parts build the best machines

FAG Gen-C One Schaeffler Design standardised for OD 26mm to 90mm. Whatever your plans, our deep groove ball bearings always give you that all-important advantage.

- Longer life
- Less noise
- Lower friction
- Choice of cage material
- Variety of sealing configurations
- Multiple radial clearance options
- Current-insulated designs
- Unmatched performance versus cost

www.schaeffler.co.uk



FAG

SCHAEFFLER



We pioneer motion

Angular contact ball bearings multiple designs

**Particularly suitable for combined loads.
They are also available in X-Life quality.**

Single row series 7200 & 7300

- Universal designs for mounting in bearing sets

Available cages:

- Polyamide (standard design) suffix TVP
- Sheet steel (suffix JP)
- Machined brass (suffix MP)
- Open and sealed versions (suffix 2RS)

Double row series 3200 & 3300

- Correspond to single row ACBB's in pairs in an O arrangement but give a narrower design
- Solid inner & outer rings
- Polyamide (standard design) suffix TVP
- Sheet steel (suffix JP)
- Machined brass (suffix MP)
- Open and sealed versions (suffix 2RS)

FAG



SCHAEFFLER

www.schaeffler.co.uk



We pioneer motion

Axial deep groove ball bearings

Series 51000 to 54000; single and double direction
Standardised, ready-to-fit with high axial load carrying capacity.

- Comprise shaft locating washer and housing locating washer; ball and cage assembly
- Can be mounted separately from each other
- Bearings are of a multi piece construction and due to their design are not self-retaining
- Available in single and double direction designs

www.schaeffler.co.uk



FAG

SCHAEFFLER



We pioneer motion

Radial insert ball bearings and housed units

FAG's Black Series radial insert ball bearings and housing units are easy to mount, smooth running and offer high reliability.

FAG Black Series | Features

- Japanese industry standard JIS B 1559 dimensions
- Durotect® B coating on inner and outer rings and flinger shields
- Cast iron housing
- Metric or inch size dimensions
- Radial insert ball bearings based on series 62.. deep groove ball bearings
- Location by means of grub screws in inner ring or tapered adaptor sleeve
- Housing tolerances J7 and H7

www.schaeffler.co.uk



SCHAEFFLER

Radial insert ball bearings

FAG radial insert ball bearings with a spherical outer ring are based on single row deep groove ball bearings 62 and are designed in accordance with JIS B 1558. The outer and inner rings as well as the flinger shields of the radial insert ball bearings are provided with the Durotect BS coating in order to offer basic protection against corrosion. The Black Series radial insert ball bearings are available with two location methods. They can be relubricated and are particularly easy to install.

Housing units with flake graphite cast iron housings

Housing units in accordance with JIS B 1557 comprise FAG flake graphite cast iron housings with a concave bore in which FAG radial insert ball bearings are fitted. These units are available as plummer block housing units, flanged housing units and take-up housing units.

Radial insert ball bearings with a spherical outer ring, when fitted in housings with a concave bore, can compensate for static misalignment of the shaft.

Housing units are supplied with a loose packed lubrication nipple and integrated end cap for the lubrication nipple as well as an Allen key.

SCHAEFFLER



FAG





FAG









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We pioneer motion

FAG Black Series range

| FAG UC Radial Insert Ball Bearings with set screws in inner ring. Bore Diameter: 12mm to 90mm, 1/2" to 3-1/2" | Manufacturer |  |  |  |  |  |  |  |  |
|---|--------------|---|---|---|---|---|--|---|---|
| | FAG | UC2 | UCP2 | UCPA2 | UCFC | UCF | UCFA | UCFL | UCT |
| | SKF | YAR2...2F | SYJ...TF | SYFJ...TF | FYC...TF | FYJ...TF | - | FYTJ...TF | TUJ...TF |
| | NTN | UC2...D1 | UCP...D1 | UCUP...D1 | UCFC...D1 | UCF...D1 | UCFA-D1 | UCFL...D1 | UCT...D1 |
| | SNR | UC2...G2 | UCP | UCPA | UCFC | UCF | UCFA | UCFL | UCT |
| | NSK | UC2 | UCP | UCPA | UCFC | UCF | UCFA | UCFL | UCT |
| | KOYO | UC2 | UCP | UCPA | UCFC | UCF | UCFA...J | UCFL | UCT...J |
| | ASAHI | UC2 | UCP | UCPA | UCFC | UCF | UCFA | UCFL | UCT |

| FAG UK Radial Insert Ball Bearings with adapter sleeve. Bore Diameter: 20mm to 80mm | Manufacturer |  |  |  |  |  |  |
|---|--------------|---|---|---|---|---|---|
| | FAG | UK2 | UKP | UKFC | UKF | UKFL | UKT |
| | SKF | YSA2...2FK, H23 | SYJ...KF | FYC...KF | FYJ...KF | FYTJ...KF | TUJ...FK |
| | NTN | UK2...D1, H23...K | UKP...D1, H23...X | UKFC...D1, H23...X | UKF...D1, H23...X | UKFL...D1, H23...X | UKT...D1, H23...X |
| | SNR | UK2...G2H | UKP...H | UKFC...H | UKF...H | UKFL...H | UKT...H |
| | NSK | UK2...+H23 | UKP...+H23 | UKFC...+H23 | UKF...H23 | UKFL...+H23 | UKT...+H23 |
| | KOYO | UK2...+H23 | UKP | UKFC | UKF | UKFL | UKT |
| | ASAHI | UK2...+H23 | UKP...+H23 | UKFC...+H | UKF...H23 | UKFL...+H | UKT...+H |

www.schaeffler.co.uk



We pioneer motion

Spherical roller bearings

Spherical roller bearings from FAG for all your application needs from 20mm to 1220mm
In every design you will benefit from

- Longer operating life
- High static & load carrying capacities
- Improved roller quality
- Reduced friction

- Lower operating temperatures
- Optimal lubrication
- Downsizing is possible
- Cylindrical and tapered bore options

www.schaeffler.co.uk

FAG



SCHAEFFLER



We pioneer motion

Cylindrical roller bearings

Cylindrical roller bearings from FAG
Available in various designs and optimised for different applications depending on the structure of the bearing.

Available with plastic, brass or steel cages.

- Cylindrical roller bearings are available as non-locating, semi-locating and locating bearing designs

- Special bearings are made for traction motor and wind turbine applications along with many other specialist applications

www.schaeffler.co.uk



SCHAEFFLER



We pioneer motion

Tapered roller bearings

Tapered roller bearings from 15 - 360mm in standard design are reliable, energy efficient and designed for high radial and axial loads with a broad range of speeds.

- Single row, matched or integral (JKO range) design
- Seperable, which simplifies fitting and mounting
- X-life quality available
- Long operating life
- Low friction, smooth running
- Operating temperatures of 200°C for OD's of 220mm and above

www.schaeffler.co.uk



SCHAEFFLER



We pioneer motion

SNV split plummer block housings

Quick to mount, easy to lubricate. For shaft diameters 20mm to 160mm and $\frac{3}{4}$ inches and $5\frac{1}{5}$ inches

- Grease outlet hole
- Simplified relubrication
- Minimal fitting work
- Supportive of very high loads
- Optimised for fitting condition monitoring

www.schaeffler.co.uk

- and relubrication systems
- Additional protection with double lip seals, labyrinth seals, felt seals, V ring seals, combined or special seals



FAG

SCHAEFFLER

We pioneer motion

medias

Product catalogue and consulting platform



Easy quoting & ordering process

- Get your current product price and availability
- Overview of current and historical orders as well as sales contracts



Central platform for all information on Industrial products & solutions

- Technical & product information
- Premium content (Whitepapers, online trainings, ...)



Technical consulting and support

- Engineering tools
- Extended product information such as CAD models and calculation tools



Sales Partner Finder

Receive a request for an offer from a **medias Plus** user by email. Add the products with one click to your **medias Business** account



The perfect tool for your customer

medias Plus

In addition to using our medias platform, you can register for medias Plus. With your free membership you get access to advanced information and features. As a registered member, you can access exclusive content to support you with selection, configuration and ordering.

The perfect tool for you

medias Business

As our registered business customers you have access to our medias Business section. Access our extended product catalogue and new features specifically designed to make the ordering process more efficient and enhance your interaction with Schaeffler.

Visit us: <https://medias.schaeffler.co.uk>

TAPERED ROLLER BEARINGS

These accept high radial loads and axial loads in one direction. They are generally fitted opposite a bearing of the same type. Load capacity depends on contact angle.

1 ROW OF TAPERED BEARINGS



Metric dimensions: ISO 355 and JIS B 1512 standards

Available with contact angles, spread from 10° to 30° and a large contact angle 40° (suffix D by NTN)

Inch dimensions: ABMA standard (including J metric series)

Can be equipped with flanges

2 ROWS OF TAPERED BEARINGS



Appears in the same form as two single-row bearings

Fitted face-to-face or back-to-back, with metric or inch dimensions

One-piece outer or inner rings

Single-row assemblies with spacers also exist

4 ROWS OF TAPERED BEARINGS



Composed of two double cones, two single flanges and one double flange

Extended life cycle thanks to the use of case hardened steel, hollow rollers and pin-type cages

Very high load capacities, adapted to rolling type applications

Available in sealed version (-LL)

ECO-TOP RANGE

Series meeting the need to protect the environment

Optimised design, enhanced life cycle, more compact bearing and reduced energy consumption



NTN BOWER RANGE

Wide range of tapered roller bearings with inner diameters up to 16 inches

Steel

Through hardened bearing steel (ECO-H)

Vacuum degassed case hardened steel (4T, ET) and special heat treatment for a longer life cycle (ETA / ECO)

Cage

Generally equipped with a cage in pressed sheets

Solid or steel pin-type cages for large bearings

Fibre glass reinforced polyamide cage possible depending on the application for smaller bearings

Contact torque



Bearing identified with the suffix -ST:

- Reduced drag torque
- Reduced heating
- Improved seizure resistance
- Simplified adjustments at assembly

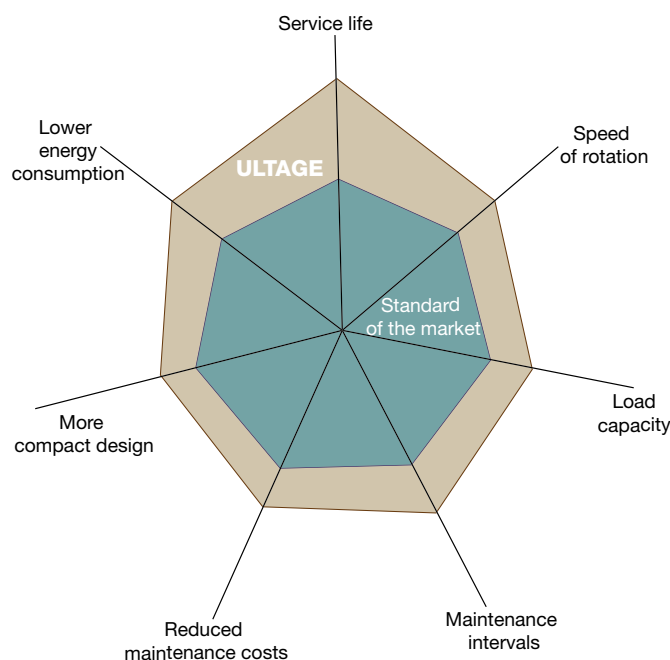
Sealing

Possible variant: sealing at the large shoulder (suffix -LX)

NTN-SNR ULTAGE : better performance for your applications

The ULTAGE name comes from a combination of the terms "ULTIMATE" and "STAGE". It is a name that provides you with optimised performance as standard, with respect to several technical criteria

PERFORMANCE COMPARISON

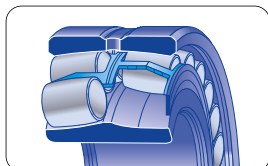


FROM 25 MM BORE UP TO 2180 MM EXTERNAL DIAMETER

NTN-SNR offers the widest range of spherical roller bearings on the market. They are available in a range of cage versions.

PRESSED STEEL CAGE (EA)

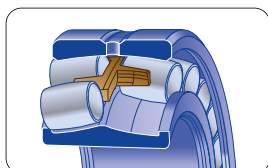
In two parts, centred on the inner ring



- > Reduced wear and friction
- > Optimum lubrication and high speeds

MACHINED SOLID BRASS CAGE (EM, L1)

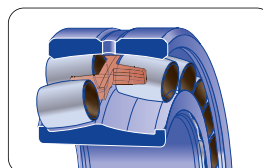
Single-piece cage, centred on the bearing housing or the inner ring



- > Extrem robustness for longer life in the most demanding environments.

SPECIAL CAGE FOR «VIBRATION APPLICATIONS» (EF800)

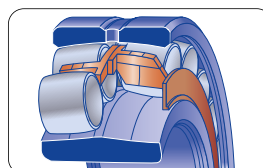
Single-piece cage with reduced bore, external diameter and radial clearance tolerances



- > Extremely accurate roller guides for longer service life.

POLYAMIDE CAGE (EG15)

Two-part, centred on the inner ring.



- > Performance and economy : elasticity and wrap-around profile for perfect guiding and reduced friction. (Max. running temperature 150°C)

[KIZEI]



THE FIRST SPHERICAL ROLLER BEARING WITH METALLIC SHIELDS

CUSTOMER BENEFITS

- Optimised production output due to longer service life
- Reduced maintenance costs
- Easy to use: **100% interchangeable** with open version

FIELD TESTS

1 Less bearing deterioration after twice service lifetime



QUARRY
Conveyor



2 Maximized profits



CEMENT PLANT
Bucket elevator

| | Open spherical roller bearing | [KIZEI] |
|-------------------|-------------------------------|--------------|
| Life time | 1 month | 3 months |
| Production stops | 12 times/year | 4 times/year |
| Maintenance costs | 100 | 30 |

Maintenance costs can be divided by 3

TECHNICAL FEATURES

7 GOOD REASONS TO CHOOSE KIZEI®

- **ULTAGE** load ratings and speed
- ISO dimensions
- High Quality nitrided steel cage and shields
- Wide working temperature range (-40° C up to +200° C)
- Easy lubrication (initial lubrication identical to open version)
- Optimal misalignment
- Simple mounting (same procedure and accessories than open version)



AVAILABLE RANGE

22208
22209
22210
22211
22212
22213
22215
22216
22217
22218
22220

- Cylindrical or tapered bore
- Normal or C3 internal clearance

| | OPEN | [KIZEI] | SEALED |
|-----------------------|-----------------|-----------------|-----------------|
| Dimensions | ISO | ISO | Special |
| Protection | 0 | + | ++ |
| Grease retention | 0 | + | ++ |
| Temperature range | -40°C to +200°C | -40°C to +200°C | -10°C to +120°C |
| Speed limit | ++ | ++ | + |
| Load rating | Ultage | Ultage | Ultage |
| Clearance check | Yes | Yes | No |
| Internal check | Yes | Yes | No |
| Sleeve & Nut | Standard | Standard | Special |
| Delivered with grease | No | No | Yes |

Typical designation >> 22212EAKW33ZZC3

Would you need an additional reference, please contact NTN-SNR

Download KIZEI® catalogue on our website:
www.ntn-snr.com



NEEDLE BEARINGS

These bearings are mainly selected for constructions requiring reduced radial dimensions and maximum rigidity and load capacity. They have little resistance for axial forces (except thrusts and combined bearings).

NEEDLE ROLLER AND CAGE ASSEMBLIES



A needle cage comprises an inseparable cage and needles and can be used to design very compact, light, constructions with maximum capacity. The shaft and housing act as a raceway and must be machined in compliance with hardness, geometry and roughness characteristics. The needles are guided precisely, therefore the needle cage can absorb much higher speeds of rotation than contact needles.

Depending on the application, different types of materials and cages are available:

| Types | Characteristics | Suffixes |
|----------|----------------------------------|----------|
| K | Fibre glass reinforced polyamide | -T2 |
| K or KJ | Welded pressed steel cage | -S |
| GK / GPK | In two parts | |
| K | Two rows | -ZW |
| KBK | For piston pins application | |
| KV | For piston pins application | -S |
| PK / GPK | For crank pins application | |
| KMJ | For crank pins application | -S |

Inch solutions are also available (PCJ).

DRAWN CUP NEEDLE ROLLER BEARINGS



Compact and light, mainly used in applications with low loads, needle sockets represent a low-cost bearing solution; the outer ring is not machined, but is obtained using precision pressing processes. It must be noted that the geometry of the raceway depends on the geometry of the housing (the low thickness of the outer ring only provides the hardness and roughness necessary for the raceway).

Standard (HK) and heavy (HMK) series, available with or without sealing, with open or closed ends (BK, BMK) Some dimensions are delivered with 2 rows of needles (-ZW)

Inches versions with cage (DCL, SCE) and contact needle versions (HCK).

NTN drawn cup needle roller bearing offer:

- simplified adapting thanks to an ideal geometry
- an improved life cycle: specific treatment of the cage and needles

NEEDLE ROLLER BEARINGS WITH SOLID RINGS



Needle roller bearings with solid rings are mainly used in applications with high loads.

- **Inseparable versions:** with or without an inner ring
 - Series 48, 49, 59 and 69. (Series 49 is also available with simple or double sealing)
 - NK series: also deliverable with the inner ring (NK+IR designation)
- If the bearing is used without an inner ring, the shaft will act as a raceway and must be machined appropriately

Separable versions: RNAO and NAO

With these versions, the inner and outer rings and the cage can be separated, opening up more assembly options.



The inner rings are delivered separately.

Versions with plunge grinding for seal support surfaces are also available.

These solid rings and needle bearings are also available in inch dimensions. (MR,MI)

NEEDLE AND ROLLER THRUST BEARINGS



Needle or roller thrust bearings are designed to absorb axial forces in one direction only. Support surfaces used as raceways must be ground and hardened.

- Needle thrust bearings: type AXK11

- Roller thrust bearings: series 811, 812, 874 and 893

Available with Polyamide cage (-T2), Aluminium alloy cage (-: lightness and enhanced performance when lack of lubricant) or pressed steel cage.

Washers:

- type **AS11** washers are thin (1 mm), therefore their support surfaces must be flat and rigid enough
- types **WS** (centered on the shaft) and **GS** (centered on the housing) are more rigid

COMBINED BEARINGS



When the application requires resistance to forces combined with substantial rigidity or minimum room, the use of combined bearings can lead to benefits. Depending on the type of bearings, axial forces may be absorbed in one or two directions.

• Uni-directional axial forces

The thrust part may comprise, either:

- a radial contact (NKX) or angular contact (NKIA) ball bearing
- rollers for high axial loads (NKXR)

If the unit must be inseparable, a flange (-Z) is proposed

Two-way axial forces

Depending on the intensity of the forces, the thrust part will consist of needles (AXN) or rollers (ARN)

CAM FOLLOWERS



Cam followers are used for applications requiring guidance with minimum contact with cam and the linear guidance systems.

Cam followers applications are very different to bearing applications. The cam followers is not fitted in a housing and its thicker outer ring rolls directly over a surface to provide guidance.

With or without a seal, with an outer ring with a convex or cylindrical profile, all cam followers are proposed:

- contact needle version (KRV-NATV) to accept significant loads
- cage version (KR-NATR) to accept higher speeds

Versions with two 2 rows of contact bearings also exist to increase capacity (NUTR, NUTW et NUKR)

- Stud Type: threaded shaft has a slot head or hex head screwdriver tightening system to simplify the attachment of the roller on the support surface. These rollers may be regreased by the shaft.
- Yoke Type: with or without lateral guidance



BEARING UNITS

www.ntn-snr.com



With You

With years of expertise, our wide range of bearing units and bearing inserts offers a complete choice to our customers.

BENEFITS

One stop shop for all your bearing unit needs

Full assortment of quality products from JIS and ISO ranges

Improve your reactivity thanks to short lead times

High level of product availability in our European Distribution Center

Optimize the output of your machines with our complete product expertise

Benefit from the advice of our highly skilled engineering team for your specific applications

BEARING UNIT RANGE



GREY CAST IRON THE POPULAR RANGE

- JIS & ISO ranges
- Available from shaft diameter 12 – 140 mm / ½ - 3 15/16 inch
- Equipped with universal G2 inserts
- Relubrication facilities as standard
- Blue painting with excellent anticorrosion properties
- Rigid protective covers from stainless steel
- Adapter sleeve already included



PRESSED STEEL FOR ECONOMICAL AND LIGHTWEIGHT CONSTRUCTIONS

- Two-piece housing made from zinc coated sheet steel
- Available as pillow block, flanged or take-up unit
- Equipped with universal G2 inserts
- Suitable for narrow ball bearing inserts set screw type US..G2, eccentric locking collar type ES..G2 and type CS with interference fit
- Made for low to moderate loads & speeds



☑ HARSCH ENVIRONMENT STAINLESS STEEL

WHEN CORROSION RESISTANCE & OXIDATION PROTECTION IS NEEDED

- 100% stainless steel resistant to corrosion: will never chip and contaminate the end product
- Food-grade seal with additional slinger (SUC)
- USDA H1 grease fully compliant with FDA regulations
- Shaft fastening by set screw or eccentric locking collar
- Protective covers to provide additional protection against regular washdowns



☑ ECONOMICAL SOLUTION THERMOPLASTIC

- 100% stainless steel bearing inserts resistant to corrosion: will never chip and contaminate the end product
- All metallic components made of high-quality stainless steel
- Housings equipped with grooves to snap protective covers into place
- USDA H1 grease fully compliant with FDA regulations
- Good friction and wear properties

BEARING INSERT SOLUTIONS BEYOND THE STANDARD



GREASED FOR LIFE



LUBSOLID®

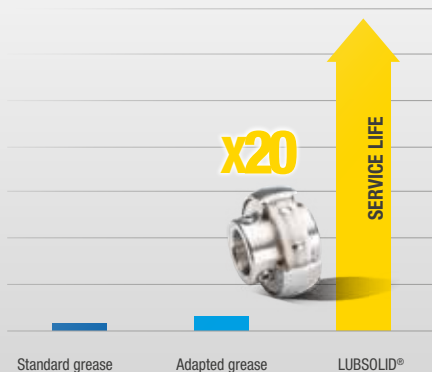
- Made of high-quality stainless steel
- Food grade lubricant with NSF certificate
- Anti-contamination effect: no lubricant leakage possible

BENEFITS

COST SAVINGS AND PRODUCTIVITY GAINS
LOWER MAINTENANCE AND MATERIAL COSTS
SUITED FOR LOCATIONS WITH DIFFICULT ACCESS:
NO NEED FOR REGULAR MONITORING OR SERVICE



HYGIENE STANDARDS



For use with stainless steel and thermoplastic housings.

AGR

- High durability and resistant to strong impacts
- Maintenance-free
- Resistant to high pressure washing

BENEFITS

COST SAVING AND PRODUCTIVITY GAINS
LOWER MAINTENANCE AND MATERIAL COSTS
BETTER OPERATING PERFORMANCE



CAUTION

With a few exceptions, these bearing inserts fit most cast iron housings. For customized bearing units, please consult the technical department to let them check for feasibility.

Download our new catalogue on: www.ntn-snr.com

NTN-SNR ROULEMENTS - 1 rue des usines - 74000 Annecy
RCS ANNECY B 325 821 072 - Code APE 2815Z - Code NACE 28.15
www.ntn-snr.com

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NTN SNR



With You



SNC PLUMMER BLOCK

Efficient, flexible and user friendly



With You

More than Standard!

Extend the life duration with the SNC plummer block housing range!

The optimized design provides excellent rigidity and stability, a vibration dampening and improves strength and heat dissipation characteristics in order to provide reduced stress levels in the bearing and a cooler running temperature of its lubricant and thereby extending operating and service life.

The solution for higher loads

Large SNC plummer block housings (from the size 520) are now also available in ductile iron EN-GJS-400-18. This SNCD designated housing features additional a factor 1.8 higher breaking loads.

The SNC plummer block housings are designed for installation of spherical roller bearings.

We recommend the use of our ULTAGE spherical roller bearings with higher increased load capacities and extended service life, to take advantage of the optimal characteristics of the SNC-Housings. We complete our range with the tools and solutions of Experts & Tools.



Your benefits:

Circular reinforcement:

- excellent stability + rigidity
- optimal vibration behavior
- effective heat dissipation



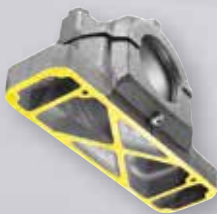
Connection options:

- delivered with 2 lubrication holes
- 2 grease nipples (1x tapered, 1x flat headed nipple) added
- all bores sealed with screws
- drain hole



X-support:

- reinforced bearing seat
- uniform load distribution
- extended life in service



Larger diameter bolts:

- higher radial loads to be supported by the housing cap



Optional grease regulation disc:

- achieves the normal operating temperature more quickly
- at high rotational speeds: reduces the operating temperature
- extends the operating and service life of the bearing

Sealing options

A variety of sealing options is available, adapted to your application



SC..DS
Double lip seal
allround use



SC..FS
Felt strip seal
high rotation speed



SC..SV
V-Ring seal
low friction



SC..LA
Labyrinth seal
high temperatures



SC..TA
Taconite seal
large dust pollution



With our ULTAGE spherical roller bearings you will have a perfect combination for your application, like for ex.:

- Industrial ventilators
- Mining and quarry
- etc.
- Conveyor systems
- Steel industry







SNC PLUMMER BLOCK

Efficient, flexible and user friendly



With You

SNR ↔ SKF Interchange list Split plummer block units





| Shaft outlet-Ø | Typ | SNC  | SNL  | SNR DS  | SKF G  | SNR FS | SKF C |
|----------------|-----|---|---|--|---|---------|---------|
| 20 | 505 | SNC505 | SNL505 | SC505DS | TSN505G | SC505FS | TSN505C |
| 20 | 605 | SNC506-605 | SNL506-605 | SC605DS | TSN605G | SC605FS | TSN605C |
| 25 | 506 | SNC506-605 | SNL506-605 | SC506DS | TSN506G | SC506FS | TSN506C |
| 25 | 606 | SNC507-606 | SNL507-606 | SC606DS | TSN606G | SC606FS | TSN606C |
| 30 | 205 | SNC205 | SNL205 | SC205DS | TSN205G | SC205FS | - |
| 30 | 305 | SNC206-305 | SNL206-305 | SC507DS | TSN305G | SC305FS | - |
| 30 | 507 | SNC507-606 | SNL507-606 | SC507DS | TSN507G | SC507FS | TSN507C |
| 30 | 607 | SNC508-607 | SNL508-607 | SC607DS | TSN607G | SC607FS | TSN607C |
| 35 | 206 | SNC206-305 | SNL206-305 | SC206DS | TSN206G | SC206FS | - |
| 35 | 306 | SNC507-606 | SNL507-606 | SC206DS | TSN206G/306G | SC206FS | - |
| 35 | 508 | SNC508-607 | SNL508-607 | SC508DS | TSN508G | SC508FS | TSN508C |
| 35 | 608 | SNC510-608 | SNL510-608 | SC608DS | TSN608G | SC608FS | TSN608C |
| 45 | 207 | SNC207-306 | SNL207 | SC207DS | TSN207G | SC207FS | - |
| 45 | 307 | SNC208-307 | SNL208-307 | SC510DS | TSN307G | SC307FS | - |
| 40 | 509 | SNC509 | SNL509 | SC509DS | TSN509G | SC509FS | TSN509C |
| 40 | 609 | SNC511-609 | SNL511-609 | SC609DS | TSN609G | SC609FS | TSN609C |
| 50 | 208 | SNC208-307 | SNL208-307 | SC208DS | TSN208G | SC208FS | - |
| 50 | 308 | SNC510-608 | SNL510-608 | SC208DS | TSN208G/308G | SC208FS | - |
| 45 | 510 | SNC510-608 | SNL510-608 | SC510DS | TSN510G | SC510FS | TSN510C |
| 45 | 610 | SNC512-610 | SNL512-610 | SC610DS | TSN610G | SC610FS | TSN610C |
| 55 | 209 | SNC209 | SNL209 | SC209DS | TSN209G | SC209FS | - |
| 55 | 309 | SNC511-609 | SNL511-609 | SC209DS | TSN209G/309G | SC209FS | - |
| 50 | 511 | SNC511-609 | SNL511-609 | SC511DS | TSN511G | SC511FS | TSN511C |
| 50 | 611 | SNC513-611 | SNL513-611 | SC611DS | TSN611G | SC611FS | TSN611C |
| 60 | 210 | SNC210-308 | SNL210 | SC210DS | TSN210G | SC210FS | - |
| 60 | 310 | SNC512-610 | SNL512-610 | SC210DS | TSN210G/310G | SC210FS | - |
| 55 | 512 | SNC512-610 | SNL512-610 | SC512DS | TSN512G | SC512FS | TSN512C |
| 55 | 612 | SNC515-612 | SNL515-612 | SC612DS | TSN612G | SC612FS | TSN612C |
| 65 | 211 | SNC211-309 | SNL211 | SC211DS | TSN211G | SC211FS | - |
| 65 | 311 | SNC513-611 | SNL513-611 | TSN211G/311G | SC211FS | - | SC211SV |
| 60 | 513 | SNC513-611 | SNL513-611 | SC513DS | TSN513G | SC513FS | TSN513C |
| 60 | 613 | SNC516-613 | SNL516-613 | SC613DS | TSN613G | SC613FS | TSN613C |
| 70 | 212 | SNC212-310 | SNL212 | SC212DS | TSN212G | SC212FS | - |
| 70 | 312 | SNC515-612 | SNL515-612 | SC212DS | TSN212G/312G | SC212FS | - |
| 65 | 515 | SNC515-612 | SNL515-612 | SC515DS | TSN515G | SC515FS | TSN515C |
| 65 | 615 | SNC518-615 | SNL518-615 | SC615DS | TSN615G | SC615FS | TSN615C |
| 75 | 213 | SNC213-311 | SNL213 | SC213DS | TSN213G | SC213FS | - |
| 75 | 313 | SNC516-613 | SNL516-613 | SC213DS | TSN213G/313G | SC213FS | - |
| 70 | 516 | SNC516-613 | SNL516-613 | SC516DS | TSN516G | SC516FS | TSN516C |
| 70 | 616 | SNC519-616 | SNL519-616 | SC616DS | TSN616G | SC616FS | TSN616C |
| 80 | 214 | SNC214 | - | SC214DS | - | SC214FS | - |
| 80 | 314 | SNC517 | SNL517 | SC214DS | TSN314G | SC214FS | - |
| 75 | 517 | SNC517 | SNL517 | SC517DS | TSN517G | SC517FS | TSN517C |
| 75 | 617 | SNC520-617 | SNL520-617 | SC617DS | TSN617G | SC617FS | TSN617C |
| 85 | 215 | SNC215-312 | SNL215 | SC215DS | TSN215G | SC215FS | - |
| 85 | 315 | SNC518-615 | SNL518-615 | SC215DS | TSN215G/315G | SC215FS | - |
| 80 | 518 | SNC518-615 | SNL518-615 | SC518DS | TSN518G | SC518FS | TSN518C |
| 80 | 618 | SNC318-618 | - | SC618DS | - | SC618FS | - |
| 90 | 216 | SNC216-313 | SNL216 | SC216DS | TSN216G | SC216FS | - |
| 90 | 316 | SNC219-316 | SNL519-616 | SC316DS | TSN316G | SC316FS | - |
| 85 | 519 | SNC519-616 | SNL519-616 | SC519DS | TSN519G | SC519FS | TSN519C |
| 85 | 619 | SNC522-619 | SNL522-619 | SC619DS | TSN619G | SC619FS | TSN619C |
| 95 | 217 | SNC217-314 | SNL217 | SC217DS | TSN217G | SC217FS | - |
| 95 | 317 | SNC220-317 | SNL520-617 | SC317DS | TSN317G | SC317FS | - |
| 90 | 520 | SNC520-617 | SNL520-617 | SC520DS | TSN520G | SC520FS | TSN520C |
| 90 | 620 | SNC524-620 | SNL524-620 | SC620DS | TSN620G | SC620FS | TSN620C |
| 100 | 218 | SNC218-315 | SNL218 | SC218DS | TSN218G | SC218FS | - |
| 100 | 318 | SNC318-618 | - | SC318DS | - | SC318FS | - |
| 110 | 319 | SNC222-319 | SNL522-619 | SC319DS | - | SC319FS | - |
| 110 | 219 | SNC519-616 | - | SC219DS | - | SC219FS | - |
| 100 | 522 | SNC522-619 | SNL522-619 | SC522DS | TSN522G | SC522FS | TSN522C |
| 115 | 220 | SNC520-617 | SNL520-617 | SC220DS | TSN220G | SC220FS | - |
| 115 | 320 | SNC224-320 | SNL524-620 | SC320DS | - | SC320FS | - |
| 110 | 524 | SNC524-620 | SNL524-620 | SC524DS | TSN524G | SC524FS | TSN524C |
| 125 | 222 | SNC522-619 | SNL522-619 | SC222DS | TSN222G | SC222FS | - |
| 115 | 526 | SNC226-526 | SNL526 | SC526DS | TSN526G | SC526FS | TSN526C |
| 135 | 224 | SNC524-620 | SNL524-620 | SC224DS | TSN224G | SC224FS | - |
| 125 | 528 | SNC228-528 | SNL528 | SC528DS | TSN528G | SC528FS | TSN528C |
| 145 | 226 | SNC226-526 | SNL526 | SC226DS | TSN226G | SC226FS | - |
| 135 | 530 | SNC230-530 | SNL530 | SC530DS | TSN530G | SC530FS | TSN530C |
| 140 | 532 | SNC232-532 | SNL532 | SC532DS | TSN532G | SC532FS | TSN532C |
| 155 | 228 | SNC228-528 | SNL528 | SC228DS | TSN228G | SC228FS | - |
| 165 | 230 | SNC230-530 | SNL530 | SC230DS | TSN230G | SC230FS | - |
| 175 | 232 | SNC232-532 | SNL532 | SC232DS | TSN232G | SC232FS | - |

SNC PLUMMER BLOCK

Efficient, flexible and user friendly



With You

|  | |  | |  | |  | |
|---|--------------|---|--------------|---|----------------|---|-------------|
| SNR SV | SKF A | SNR LA | SKF S | SNR TA | SKF ND | SNR EC | SKF ANSH |
| SC505SV | TSN505A | SC505LA | TSN505S | SC505TA | TSN505ND | SC505EC | ASNH505 |
| SC605SV | TSN605A | SC605LA | TSN605S | SC605TA | TSN605ND | SC506-605EC | ASNH506-605 |
| SC506SV | TSN506A | SC506LA | TSN506S | SC506TA | TSN506ND | SC506-605EC | ASNH506-605 |
| SC606SV | TSN606A | SC606LA | TSN606S | SC606TA | TSN606ND | SC507-606EC | ASNH507-606 |
| - | - | SC205LA | TSN205S | SC205TA | TSN205ND | SC506-605EC | ASNH506-605 |
| SC305SV | TSN305A | SC305LA | TSN305S | SC305TA | TSN305ND | SC507-606EC | ASNH507-606 |
| SC507SV | TSN507A | SC507LA | TSN507S | SC507TA | TSN507ND | SC507-606EC | ASNH507-606 |
| SC607SV | TSN607A | SC607LA | TSN607S | SC607TA | TSN607ND | SC508-607EC | ASNH508-607 |
| SC206SV | TSN206A | SC206LA | TSN206S | SC206TA | TSN206ND | SC507-606EC | ASNH507-606 |
| SC206SV | TSN206A/306A | SC206LA | TSN206S/306S | SC206TA | TSN206ND/306ND | SC507-606EC | ASNH507-607 |
| SC508SV | TSN508A | SC508LA | TSN508S | SC508TA | TSN508ND | SC508-607EC | ASNH508-607 |
| SC608SV | TSN608A | SC608LA | TSN608S | SC608TA | TSN608ND | SC510-608EC | ASNH510-608 |
| SC207SV | TSN207A | SC207LA | TSN207S | SC207TA | TSN207ND | SC509EC | ASNH509 |
| SC307SV | TSN307A | SC307LA | TSN307S | SC307TA | TSN307ND | SC510-608EC | ASNH510-608 |
| SC509SV | TSN509A | SC509LA | TSN509S | SC509TA | TSN509ND | SC509EC | ASNH509 |
| SC609SV | TSN609A | SC609LA | TSN609S | SC609TA | TSN609ND | SC511-609EC | ASNH511-609 |
| SC208SV | TSN208A | SC208LA | TSN208S | SC208TA | TSN208ND | SC510-608EC | ASNH510-608 |
| SC208SV | TSN208A/308A | SC208LA | TSN208S/308S | SC208TA | TSN208ND/308ND | SC510-608EC | ASNH510-609 |
| SC510SV | TSN510A | SC510LA | TSN510S | SC510TA | TSN510ND | SC510-608EC | ASNH510-608 |
| SC610SV | TSN610A | SC610LA | TSN610S | SC610TA | TSN610ND | SC512-610EC | ASNH512-610 |
| SC209SV | TSN209A | SC209LA | TSN209S | SC209TA | TSN209ND | SC511-609EC | ASNH511-609 |
| SC209SV | TSN209A/309A | SC209LA | TSN209S/309S | SC209TA | TSN209ND/309ND | SC511-609EC | ASNH511-610 |
| SC511SV | TSN511A | SC511LA | TSN511S | SC511TA | TSN511ND | SC511-609EC | ASNH511-609 |
| SC611SV | TSN611A | SC611LA | TSN611S | SC611TA | TSN611ND | SC513-611EC | ASNH513-611 |
| SC210SV | TSN210A | SC210LA | TSN210S | SC210TA | TSN210ND | SC512-610EC | ASNH512-610 |
| SC210SV | TSN210A/310A | SC310LA | TSN210S/310S | SC210TA | TSN210ND/310ND | SC512-610EC | ASNH512-611 |
| SC512SV | TSN512A | SC512LA | TSN512S | SC512TA | TSN512ND | SC512-610EC | ASNH512-610 |
| SC612SV | TSN612A | SC612LA | TSN612S | SC612TA | TSN612ND | SC515-612EC | ASNH515-612 |
| SC211SV | TSN211A | SC211LA | TSN211S | SC211TA | TSN211ND | SC513-611EC | ASNH513-611 |
| TSN211A/311A | SC211LA | TSN211S/311S | SC211TA | TSN211ND/311ND | SC513-611EC | ASNH513-612 | ASNH513-611 |
| SC513SV | TSN513A | SC513LA | TSN513S | SC513TA | TSN513ND | SC513-611EC | ASNH513-611 |
| SC613SV | TSN613A | SC613LA | TSN613S | SC613TA | TSN613ND | SC516-613EC | ASNH516-613 |
| SC212SV | TSN212A | SC212LA | TSN212S | SC212TA | TSN212ND | SC515-612EC | ASNH515-612 |
| SC212SV | TSN212A/312A | SC212LA | TSN212S/312S | SC212TA | TSN212ND/312ND | SC515-612EC | ASNH515-613 |
| SC515SV | TSN515A | SC515LA | TSN515S | SC515TA | TSN515ND | SC515-612EC | ASNH515-612 |
| SC615SV | TSN615A | SC615LA | TSN615S | SC615TA | TSN615ND | SC518-615EC | ASNH518-615 |
| SC213SV | TSN213A | SC213LA | TSN213S | SC213TA | TSN213ND | SC516-613EC | ASNH516-613 |
| SC213SV | TSN213A/313A | SC213LA | TSN213S/313S | SC213TA | TSN213ND/313ND | SC516-613EC | ASNH516-614 |
| SC516SV | TSN516A | SC516LA | TSN516S | SC516TA | TSN516ND | SC516-613EC | ASNH516-613 |
| SC616SV | TSN616A | SC616LA | TSN616S | SC616TA | TSN616ND | SC519-616EC | ASNH519-616 |
| SC214SV | - | SC214LA | - | SC214TA | - | SC517EC | - |
| SC214SV | TSN314A | SC214LA | TSN314A | SC214TA | TSN314ND | SC517EC | ASNH516 |
| SC517SV | TSN517A | SC517LA | TSN517S | SC517TA | TSN517ND | SC517EC | ASNH517 |
| SC617SV | TSN617A | SC617LA | TSN617S | SC617TA | TSN617ND | SC520-617EC | ASNH520-617 |
| SC215SV | TSN215A | SC215LA | TSN215S | SC215TA | TSN215ND | SC518-615EC | ASNH518-615 |
| SC215SV | TSN215A/315A | SC215LA | TSN215S/315S | SC215TA | TSN215ND/315ND | SC518-615EC | ASNH518-614 |
| SC518SV | TSN518A | SC518LA | TSN518S | SC518TA | TSN518ND | SC518-615EC | ASNH518-615 |
| SC618SV | - | SC618LA | - | SC618TA | - | SC318-618EC | - |
| SC216SV | TSN216A | SC216LA | TSN216S | SC216TA | TSN216ND | SC216-313EC | ASNH216 |
| SC316SV | TSN316A | SC316LA | TSN316S | SC316TA | TSN316ND | SC519-616EC | ASNH519-616 |
| SC519SV | TSN519A | SC519LA | TSN519S | SC519TA | TSN519ND | SC519-616EC | ASNH519-616 |
| SC619SV | TSN619A | SC619LA | TSN619S | SC619TA | TSN619ND | SC522-619EC | ASNH522-619 |
| SC217SV | TSN217A | SC217LA | TSN217S | SC217TA | TSN217ND | SC217-314EC | ASNH217 |
| SC317SV | TSN317A | SC317LA | TSN317S | SC317TA | TSN317ND | SC520-617EC | ASNH520-617 |
| SC520SV | TSN520A | SC520LA | TSN520S | SC520TA | TSN520ND | SC520-617EC | ASNH520-617 |
| SC620SV | TSN620A | SC620LA | TSN620S | SC620TA | TSN620ND | SC524-620EC | ASNH524-620 |
| SC218SV | TSN218A | SC218LA | TSN218S | SC218TA | TSN218ND | SC218-315EC | ASNH218 |
| SC318SV | - | SC318LA | - | SC318TA | - | SC318-618EC | - |
| SC319SV | TSN319A | SC319LA | TSN319S | SC319TA | TSN319ND | SC522-619EC | ASNH522-619 |
| SC219SV | - | SC219LA | - | SC219TA | - | SC519-616EC | - |
| SC522SV | TSN522A | SC522LA | TSN522S | SC522TA | TSN522ND | SC522-619EC | ASNH522-619 |
| SC220SV | TSN220A | SC220LA | TSN220S | SC220TA | TSN220ND | SC520-617EC | ASNH520-617 |
| SC320SV | TSN320A | SC320LA | TSN320S | SC320TA | TSN320ND | SC524-620EC | ASNH524-620 |
| SC524SV | TSN524A | SC524LA | TSN524S | SC524TA | TSN524ND | SC524-620EC | ASNH524-620 |
| SC222SV | TSN222A | SC222LA | TSN222S | SC222TA | TSN222ND | SC522-619EC | ASNH522-619 |
| SC526SV | TSN526A | SC526LA | TSN526S | SC526TA | TSN526ND | SC226-526EC | ASNH526 |
| SC224SV | TSN224A | SC224LA | TSN224S | SC224TA | TSN224ND | SC524-620EC | ASNH524-620 |
| SC528SV | TSN528A | SC528LA | TSN528S | SC528TA | TSN528ND | SC228-528EC | ASNH528 |
| SC226SV | TSN226A | SC226LA | TSN226S | SC226TA | TSN226ND | SC226-526EC | ASNH526 |
| SC530SV | TSN530A | SC530LA | TSN530S | SC530TA | TSN530ND | SC230-530EC | ASNH530 |
| SC532SV | TSN532A | SC532LA | TSN532S | SC532TA | TSN532ND | SC232-532EC | ASNH532 |
| SC228SV | TSN228A | SC228LA | TSN228S | SC228TA | TSN228ND | SC228-528EC | ASNH528 |
| SC230SV | TSN230A | SC230LA | TSN230S | SC230TA | TSN230ND | SC230-530EC | ASNH530 |
| SC232SV | TSN232A | SC232LA | TSN232S | SC232TA | TSN232ND | SC232-532EC | ASNH532 |

THE BEARING BOX



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With You



BEBOX

**With the help of our experts,
you boost the operational
efficiency of your business:**

- **By cutting** your maintenance costs
- **By training you** in best practise
- **Decrease machinery** down time
- **Identify root** cause issues

Training:

- **100% adapted** to your needs
- **Theory:** Basics, bearing technology, bearing life, lubrication, clearance
- **Practical:** Training, demonstration with tools
- **Bearing lubrication**



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requirements.**

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DEEP GROOVE BALL BEARINGS TOPLINE


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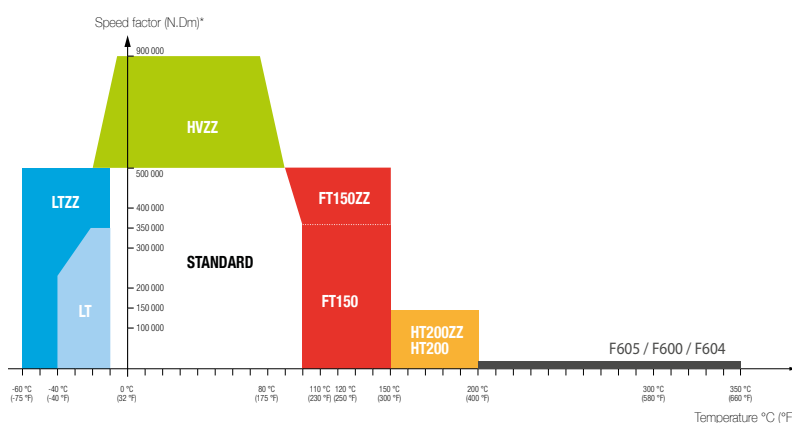

With You

Since 1997, TOPLINE has been the unique range of bearings for extreme applications. In 2020, it will be renewed thanks to two technical evolutions.

STRENGTHS

A HIGHLY TECHNICAL RANGE READY TO USE AND AVAILABLE FROM STOCK.

OUR RANGE



TECHNICAL FACTSHEET

Series: 6000, 6200, 6300

Diameters: bore code 00 to 13 **

Sealing type: seals or shields, except F600 and F605

Types :

HVZZ : High Speed up to 900 000 N.Dm

LT : Low Temperature -40°C

FT150 : High temperature up to 150°C

HT200 : High temperature up to 200°C

F60x : Up to 350°C

* N.Dm is a speed factor where N is the speed of rotation in rpm and Dm is the average diameter of the bearing $(d + D)/2$

** Variable according to types and series

BENEFITS AND 2020 IMPROVEMENTS

BY RENEWING OUR TECHNICAL CHOICES ON GREASES,
WE IMPROVE PERFORMANCE OF TWO OF OUR RANGES:



FT150 : Quieter with a noise level reduced by a factor of 4

Able to propose the best solution for your customers increasing demands



Up to 140rpm for F604 - Performance x 3

Target a range of wider applications

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With You

TECHNICAL CHARACTERISTICS

We use the best technologies available, so that each product is ideally geared towards your needs.

| Products | Cage | Internal clearance | Grease | Sealing | Other | Temperature range |
|------------------|--------------------------------------|--------------------|---|--|---|--|
| HVZZ | Glass fibre reinforced polyamide 6.6 | C3 | Superior quality. Lithium thickener + synthetic base oil | Steel shields | Precision P6, P5. High-precision balls (<= Class 10) | -20°C to +120°C |
| LT LTZZ | Steel | C3 | Suited to low temperatures + presence of humidity. Lithium thickener + synthetic base oil | Nitrile rubber seals (NBR) or steel shields | - | LT: -40°C to +100°C LTZZ: -60°C to +120°C |
| FT150 FT150ZZ | Steel | C3 | Adapted to high temperatures. Polyurea thickener + synthetic base oil | Fluoroelastomer seals (FKM) or steel shields | - | -30°C to +150°C |
| HT200 HT200ZZ | Steel | C4 | Adapted to high temperatures. PTFE solid lubricant and PFPE oil | Fluoroelastomer seals (FKM) or steel shields | Specific heat treatment | -40°C to +200°C |
| F605 | Steel | Multiple of C5* | ** | - | Brand is stamped | Temperature range between +200°C and +350°C (continuous or cyclic) |
| F600 | Steel | Multiple of C5* | | - | Specific surface treatment (phosphatisation + MoS2 deposition)*** | |
| F604 | Steel | Multiple of C5* | Suitable for very high temperatures. Polyalkylene glycol base oil + solid additive | Steel shields | Brand is stamped | |

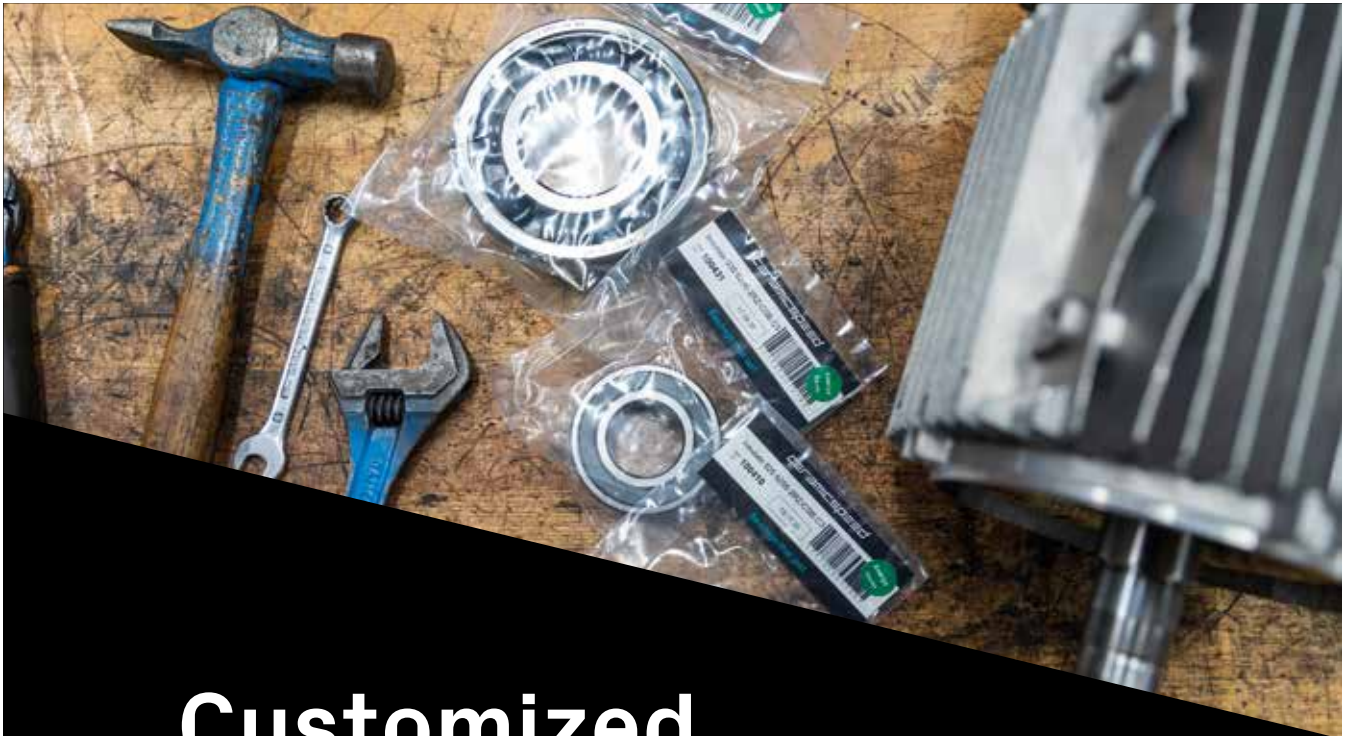
For more information about the temperature ranges, please contact us.



* Significantly increased internal clearance to offset the material's expansion effects.

** In case of F600 and F605, if additional lubrication is required, an appropriate amount of grease may be introduced into the bearing. Contact NTN-SNR for more information.

*** Surface treatment for greater oxidation resistance and improved lubrication. Caution: F600 and F604 products must be used with care in damp environments, since MoS2 may react with water to produce sulphuric acid.



Customized Hybrid Bearings - With Short Lead time



Food &
Beverage



E-motor



Special
Applications

We offer fully customizable ceramic hybrid bearing solutions down to single unit inquiries for both e-motors, food and beverage and special application. We have more than 12 years of experience in the development of ceramic hybrid bearings for any application that does not fit the standard product categories and we take pride in the quality of our bearings and to hand build the right bearing for our customers.



Hand Built in Denmark

CERAMICSPEED



Barden Spindle Bearings

The Barden Corporation (UK) Ltd has more than 70 years of market-leading expertise in the design and manufacture of super precision ball bearings. Working together with international partners, Barden shares best practices and knowledge, delivering high-end bearings and assemblies tailored to the demands and requirements of customers.

Barden bearings are manufactured to the highest quality standards and the company offers a full range of engineering support services. Barden has a fast and flexible mindset which is rooted in all areas of the business.



Products

Barden specialises in production of spindle ball bearings manufactured to the highest tolerance standards. The product range covers bearings from 3mm inner diameter up to 180mm outer diameter. The bearings are designed to offer exceptionally long lifetimes, extreme corrosion resistance if required and are suitable for high operating speeds.

Barden bearings are suitable for applications including motorised spindles, belt driven mechanical spindles, and specialist applications such as rotary unions for machine tool spindles. They provide excellent performance under the most demanding conditions.

Quality

The tolerances for size, geometry and running accuracy of Barden spindle bearings fully comply with international ISO 492 and national DIN 620 standards, as well as American ABEC classes. Bearings are fitted with balls which meet the highest tolerance standards, 'Grade 5' as a minimum, and manufactured to ISO P4S as standard and up to P2 where required.

Barden has world leading systems and processes in place and a flexible approach to manufacturing. This, combined with large stocks of different product types, means customer demands can be fully met and product delivered quickly.



Angular Contact Ball Bearings

Available in P4, P4S and P2 precision grade with 15° and 25° contact angles. Steel balls are supplied as standard. Universally ground for interchangeable mounting arrangements or in dedicated matched bearing sets.

Optional Versions

Sealed Bearings

Seals exclude contamination, contain lubricants and protect the bearing from internal damage during handling. Sealed and greased using non-contact seals, these bearings offer optimum performance in challenging applications.

Direct Lubrication Version

Designed for maximum speed where radial oil lubrication systems are featured. As a rule the use of DLR (Direct Lube) bearings results in a reduction of running costs and proves more reliable than systems using axial oil supply.

Ceramic Ball (Hybrid) Bearings

Ceramic balls used in place of steel balls can radically improve bearing performance in several ways:

- **Low vibration and noise.** Vibration levels can be up to seven times lower than conventional steel ball bearings. This is because ceramic balls are 60% lighter than steel balls and their surface finish is almost perfectly smooth.
- **High running speeds.** Ceramic hybrid bearings run at significantly lower operating temperatures, allowing running speeds to increase by up to 50%.
- **Low wear and long operating life.** Bearings with ceramic balls have been proven to last up to five times longer than conventional steel ball bearings. The inherent properties of silicon nitride mean the balls drastically reduce the predominant cause of surface wear in conventional bearings. Lower operating temperatures also help extend lubricant life and they provide excellent performance where there is insufficient lubrication.
- Systems equipped with ceramic hybrids show higher rigidity and higher natural frequency making them less sensitive to vibration.

Applications and Industries

Barden super precision ball bearings are found throughout industry in applications where superior performance and reliability under challenging conditions is essential.

- | | | |
|-----------------------|--------------------------------------|----------------------------------|
| ■ Machine Tools: | ■ Aerospace & Defence Industries | ■ Medical & Dental Equipment |
| ■ Grinding | ■ Satellite Positioning Applications | ■ High Speed Electric Motors |
| ■ Milling | ■ Vacuum Pump Technologies | ■ Spindle Repairers & Rebuilders |
| ■ Turning | ■ Textile Equipment | ■ Machine Tool Repairers |
| ■ Machining Centres | ■ Food Processing | ■ Energy Generation Systems |
| ■ Ball Screw Supports | ■ Robotics | ■ Other Specialist Applications |



AUSTRIAN QUALITY COMBINED WITH ADVANCED TECHNOLOGY

NKE
B E A R I N G S

NKE AUSTRIA GmbH is a premium bearing manufacturer with headquarters in Steyr, Austria. The company was founded in 1996 by a group of senior staff members of the former Steyr Wälzlager.

NKE manufactures both standard and special bearings for all industrial applications. Our core competences - engineering, product development, final processing of components, assembly, quality assurance, logistics, sales and marketing - are centralised in Steyr. The site is accredited with ISO 9001:2015 (design, development, manufacturing and distribution of bearings), ISO 14001:2015 and OHSAS 18001.

NKE bearings are distributed through international representative offices and more than 240 distribution outlets in over 60 countries.

We offer:

- / Standard bearings with a comprehensive stock range.
- / Tailor-made bearings for special requirements.
- / Technical service (e.g. consulting, documentation, training etc.)

100% Made in Austria

All NKE bearings are manufactured with state-of-the-art equipment. They undergo stringent and documented quality inspection. By using advanced testing and measuring equipment and applying a rigorous quality policy, we can guarantee that every single batch of bearings delivered is of the highest quality standards.



Bearings move the world

Bearings are versatile and have contributed to change the world and make it as technologically advanced as it is today. Indeed, bearings move the world. The perfect combination of **quality, innovation** and **experience** in NKE bearings, are the **ideal choice for our distributors. Together: We are experts in bearing solutions!**

NKE Austria GmbH, in order to offer a complete range of bearings to its customers, regularly adds new products. The **stock programme** is **continuously changing and growing**. Greater availability of different types and sizes is one of NKE's goals.

In NKE's stock programme you can find:

| | |
|---|---|
| Deep groove ball bearings (single and double row) | Washers |
| Cylindrical roller bearings including full complement | Conical sleeves |
| Needle roller bearings | Four point contact bearings |
| Insert bearings | Spherical roller bearings |
| Bearing housings | Self-aligning ball bearings |
| Axial cylindrical roller bearings | Thrust ball bearings |
| Spherical plain bearings | Angular contact ball bearings (single and double row) |
| Cam and track rollers, cam and track followers | Cylindrical roller thrust bearings |
| Locknuts | Tapered roller bearings |

Imperials: LJ, MJ, LJT, MJT, LRJ, MRJ

Many of the advantages of rolling element bearings are:

- / Less starting torque, energy conservation
- / Capability to take on combined radial and axial loads
- / Greater load carrying capabilities
- / Maintenance free, sealed "for-life" design
- / Less lubrication consumption
- / Precise guidance of shafts
- / Suitable for greater operating temperatures

Since 2018 NKE is part of the Fersa Group, **present in more than 100 countries** with **4 factories** and **8 logistic centres** all over the world **with the only aim to be close to its customers**.

NKE develops and manufactures **premium quality** bearings for a wide spectrum of **industrial applications**.

Mechanical Drives



Electrical Drives



Fluid Technology



Agri-Industry



NKE electrically insulated bearings – efficient and effective

NKE provides bearings with oxide ceramic insulating layers on the bearing ring. Applied with plasma technology, the insulation has a guaranteed breakdown resistance of at least 1000V AC or DC.

Two variants are available:

/ SQ77: Insulation on the outer ring

/ SQ77E: Insulation on the inner ring (Fig. right)



Bearings for traction motors and railway gearboxes

Traction motor bearings must demonstrate long service life, whereas gearbox bearings that operate under high speeds and loads, must endure shocks, vibrations and high temperatures. Equipped with engineering know-how and manufacturing expertise, NKE bearings for gearboxes and traction motors are usually produced with special specifications. (e.g. SQ1 for traction motors).

FERSAGROUP
NKE
BEARINGS

USA

Technical and sales offices
Logistics Center

BRAZIL

Technical and sales offices
Logistics Center

SPAIN

Fersa Headquarters
Technology Center
Manufacturing plant
Logistics Center



AUSTRIA

NKE Headquarters
Technology Center
Manufacturing plant
Logistics Center



CHINA - Shenyang

Technology Center
Manufacturing plant
Logistics Center



CHINA - Jiaxing

Technology Center
Manufacturing plant
Logistics Center

INDIA

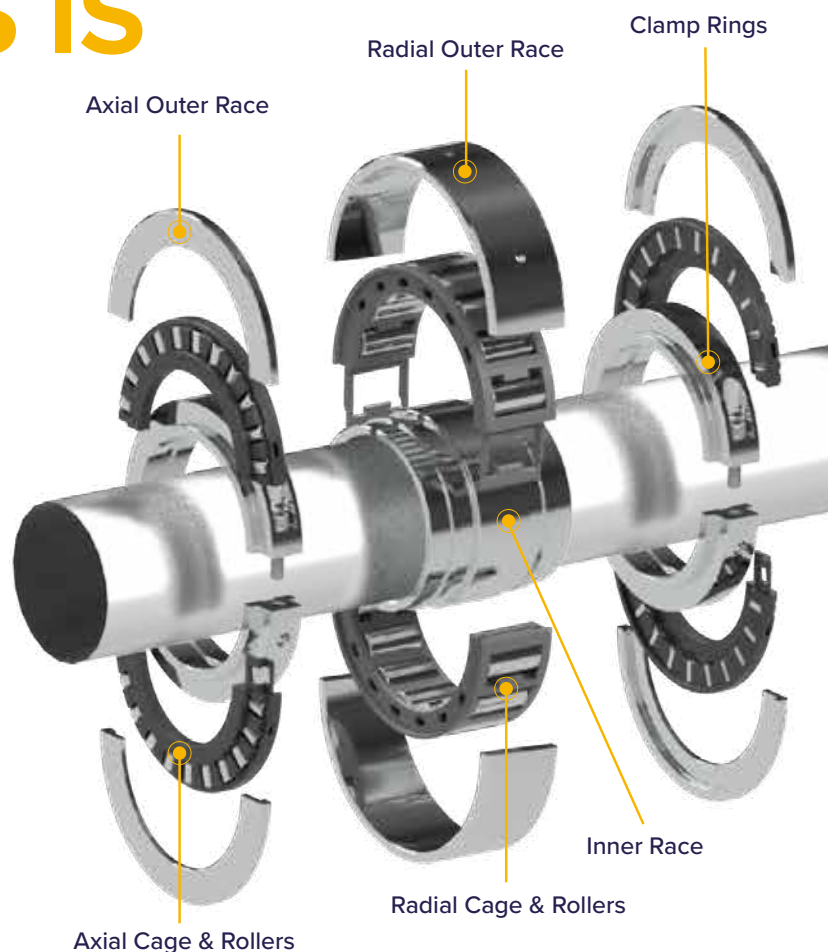
Quality Center

**A SPANISH-AUSTRIAN
COMPANY**

THE FUTURE OF SPLIT BEARINGS IS HERE



2 Year Warranty
Parts and Labour



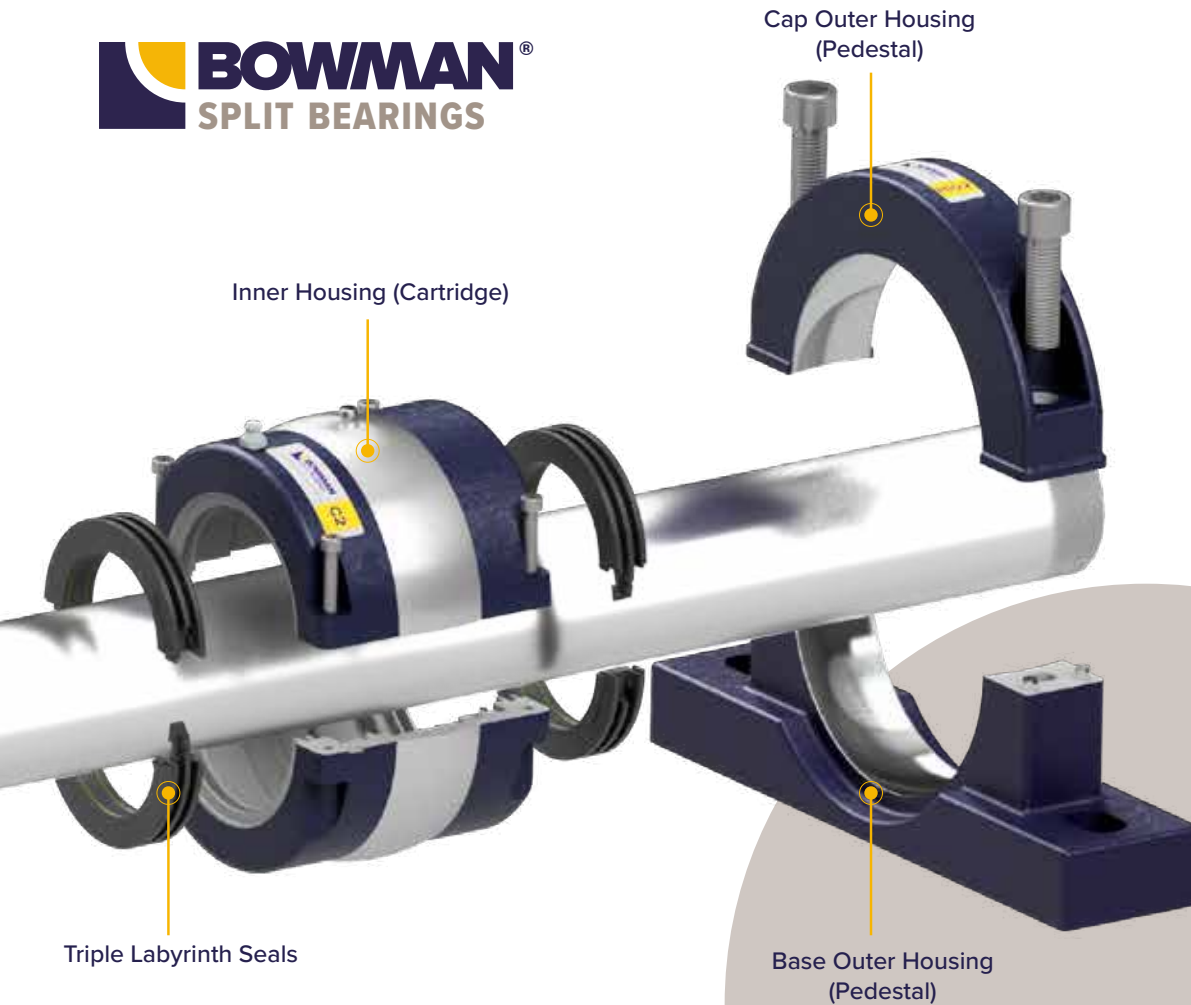
ADVANCED SPHERICAL SPLIT ROLLER BEARINGS

Dramatically Reduced Downtime

Advanced Spherical Split Roller Bearing kits drop directly into the existing SN, SAF, SNL and SD housings. This has revolutionised the replacement of industrial and marine units as it allows the bearings to be replaced without having to remove the shaft or surrounding equipment.



Design and Manufactured in the UK



ADVANCED SPLIT ROLLER BEARINGS

Up to 75% Higher Radial Load Capacity and Up to a 1000% Increase in Axial Load Capacity in Both Directions

- ▶ Dramatically reduced downtime
- ▶ The axial bearing design enables calculation of L10 life
- ▶ Stronger ductile (SG) cartridges and pedestals as standard
- ▶ Direct interchange with existing manufacturers outer housing
- ▶ Different Mounting Options
- ▶ Metric and Imperial Sizes
- ▶ Adaptions of the design can be accomdated
- ▶ Special extended seals are available which overcome worn shafts



The industry standard

Oilite® has been acknowledged as the undisputed market leader in self-lubricating bearings for more than 80 years, and today sets the standard for other products with its quality and reliability.

The extensive technical knowledge and manufacturing resources behind Oilite® have resulted in a vast array of sophisticated, high quality components that are supplied to a wide range of industries, throughout the world.

Widest range in Europe

As well as being the UK's number one choice, Oilite® bearings are also produced for other EU markets and offer the widest choice of self-lubricating bearings anywhere in Europe. Standard stock ranges are available in metric and inch. To ensure that customers have the benefit of fast delivery, a large range of European sizes are always stocked.

- 1000 European standard sizes
- Stock holding for fast delivery

There are now five standard stock ranges, ISO Metric, Inch, DIN 1850, French Metric and Scandinavian Metric.

Bespoke products

Where customer requirements are not met by stock items, our bespoke service enables us to produce both bronze and iron bearings and customer specified structural parts that are specifically designed to meet individual requirements.

Manufacturing quality and efficiency

Our manufacturing facilities are highly automated for maximum efficiency and competitiveness. Rigorous quality control procedures are adopted at all stages of manufacture.

Custom Machining

We also specialise in machining Oilite® self-lubricating bearings and plates to meet individual specifications and tolerances. This service provides, for example, one-off requirements in machine maintenance or limited production runs in the OEM design field or for prototype testing before committing to tooling. Specialist tools and machining techniques are employed. This maintains the performance characteristics and physical properties which are the prerequisite of these components.

Certification

The company is certified to the Quality Management Systems requirement of ISO 9001:2008 by LRQA Certificate No. LRQ0960929 and is approved for use by:

- Augusta Westland
- Messier Dowty
- Hawker Beechcraft Corporation

Certificates of conformity & Certificates of material analysis are supplied by request.

Special Lubricants & Additives

The standard stock range of Oilite® bearings is impregnated with a mineral oil SAE 30 viscosity; all machined Oilite® bearings and plates are supplied fully impregnated after machining. A wide range of lubricants with varying temperature ranges are available to meet specific requirements. Lubricant additives are also available to impart anti-wear properties in marginal lubrication conditions such as stainless steel shaft applications.

Technical Advice

Extensive technical resources are available to resolve bearing problems. Engineers are always available to discuss projects in detail, without obligation.

Oilite® conforms to DIN 1850/ISO 2795

Oilite® metric bearings are manufactured to the tolerances set out in ISO 2795 - Plain Bearings from Sintered Material. The German stock range of bearings conform to DIN 1850.

Material Choice

Standard Oilite® - oil retaining tin bronze is the generally specified material. It gives a good balance between strength, wear resistance, conformability and durability in operation. Ideal in a wide variety of applications where "self lubricating" properties are required over a long period of time.

Super Oilite® - an iron copper material suited to high static loads and slow oscillatory motion.

Iron Oilite® - 100% iron oil-retaining bearings provide an ideal solution in high stress low revolution applications.

WMU® and W/MLF Self Lubricated Bearings WMX® Externally Lubricated Bearings



(Dimensions and tolerances to ISO 3547)

Stock range includes

- Metric plain
- Metric flanged
- Metric washers
- Metric strip
- Imperial plain
- Imperial washers
- Imperial strip*

| | |
|-------------------------------|---|
| Structure | Steel support strip S.A.E 1010. Sintered Bronze layer. PTFE. |
| Static load | 250 N/mm ² |
| Dynamic load | 140 N/mm ² |
| Maximum sliding speed | 2.5 m/s dry 5.0 m/s with oil |
| Operating temperature | -200°C to +280°C |
| Thermal conductivity | 46 W/mK |
| Coefficient of friction | |
| W/MU Dry | 0.02 to 0.20 |
| W/MU Oiled | 0.02 to 0.15 |
| W/MLF Dry | 0.04 to 0.30 |
| W/MLF Oiled | 0.02 to 0.10 |
| Recommended housing tolerance | 4.5mm/5.5mm H6 7.0mm/305mm H7 |
| Recommended shaft tolerance | 3.0mm/4.0mm h6 5.0mm/75mm f7 80mm/300mm h8 |
| Recommended shaft finish | Ra ≤ 0.4um (N5) |
| Recommended shaft hardness | HB > 200 |

W/MUB Bronze Support Strip instead of Steel

Has greater resistance to corrosion than standard W/MU product.

Range, dimensions and tolerances are as standard W/MU product.



(Dimensions and tolerances to ISO 3547)

Stock range includes

- Metric plain
- Metric washers
- Metric strip
- Imperial plain*
- Imperial washers*
- Imperial strip*

| | |
|----------------------------------|---|
| Structure | Steel support strip S.A.E 1010. Sintered Bronze layer. Co-Acetal polymer. |
| Static load | 140 N/mm ² |
| Dynamic load | 70 N/mm ² |
| Maximum sliding speed | 2.5 m/s with grease |
| Operating temperature | -40°C to +110°C |
| Intermittent maximum temperature | 130°C |
| Thermal conductivity | 2W/mK |
| Coefficient of friction | 0.05 to 0.12 with grease |
| Recommended housing tolerance | H7 |
| Recommended shaft tolerance | h8 |
| Recommended shaft finish | HB > 200 |
| Recommended shaft hardness | HB > 200 |

Fitting Guidelines

1. Always use a fitting pin and fitting collar. See our fitting data sheet.
2. Lubricate back of bearing prior to assembly.
3. Chamfer lead in on housing to assist with assembly.



WMX® Wrapped Imperial Plain. Acetal X Type

| Reference | I.D. | O.D. | Recommended Tolerances | | | | Bearing Size when fitted | | Oil hole | Standard Length Options (L) | | | |
|--------------|---------|---------|------------------------|--------|--------|--------|--------------------------|--------|----------|-----------------------------|-------|-------|-------|
| | Nominal | | Housing | | Shaft | | Bore | | Diameter | Tolerance +/- 0.010" | | | |
| | (inch) | | (inch) | | | | (inch) | | (inch) | (inch) | | | |
| TFPI06TX x L | 3⁄8 | 15⁄32 | 0.4694 | 0.4687 | 0.3648 | 0.3639 | 0.3694 | 0.3667 | 5⁄32 | 3⁄8 | 1⁄2 | 3⁄4 | |
| TFPI07TX x L | 7⁄16 | 17⁄32 | 0.5319 | 0.5312 | 0.4273 | 0.4263 | 0.4319 | 0.4292 | 5⁄32 | 1⁄2 | 3⁄4 | | |
| TFPI08TX x L | 1⁄2 | 19⁄32 | 0.5944 | 0.5937 | 0.4897 | 0.4887 | 0.4944 | 0.4917 | 5⁄32 | 3⁄8 | 1⁄2 | 5⁄8 | 7⁄8 |
| TFPI09TX x L | 9⁄16 | 21⁄32 | 0.6569 | 0.6562 | 0.5522 | 0.5512 | 0.5569 | 0.5542 | 5⁄32 | 1⁄2 | 3⁄4 | | |
| TFPI10TX x L | 5⁄8 | 23⁄32 | 0.7195 | 0.7187 | 0.6146 | 0.6136 | 0.6195 | 0.6167 | 5⁄32 | 1⁄2 | 5⁄8 | 3⁄4 | 7⁄8 |
| TFPI11TX x L | 11⁄16 | 25⁄32 | 0.7820 | 0.7812 | 0.6770 | 0.6760 | 0.6820 | 0.6792 | 5⁄32 | 7⁄8 | | | |
| TFPI12TX x L | 3⁄4 | 7⁄8 | 0.8758 | 0.8750 | 0.7390 | 0.7378 | 0.7444 | 0.7412 | 5⁄32 | 1⁄2 | 3⁄4 | 1 | |
| TFPI14TX x L | 7⁄8 | 1 | 1.0008 | 1.0000 | 0.8639 | 0.8627 | 0.8694 | 0.8662 | 1⁄4 | 3⁄4 | 7⁄8 | 1 | |
| TFPI16TX x L | 1 | 1 1⁄8 | 1.1258 | 1.1250 | 0.9888 | 0.9876 | 0.9944 | 0.9912 | 1⁄4 | 3⁄4 | 1 | 1 1⁄2 | |
| TFPI18TX x L | 1 1⁄8 | 1 9⁄32 | 1.2822 | 1.2812 | 1.1138 | 1.1126 | 1.1202 | 1.1164 | 1⁄4 | 3⁄4 | 1 | | |
| TFPI20TX x L | 1 1⁄4 | 1 13⁄32 | 1.4072 | 1.4062 | 1.2387 | 1.2371 | 1.2452 | 1.2414 | 1⁄4 | 3⁄4 | 1 | 1 1⁄4 | 1 3⁄4 |
| TFPI22TX x L | 1 3⁄8 | 1 17⁄32 | 1.5322 | 1.5312 | 1.3635 | 1.3619 | 1.3702 | 1.3664 | 1⁄4 | 1 | 1 3⁄8 | 1 3⁄4 | |
| TFPI24TX x L | 1 1⁄2 | 1 21⁄32 | 1.6572 | 1.6562 | 1.4884 | 1.4868 | 1.4952 | 1.4914 | 5⁄16 | 1 | 1 1⁄4 | 1 1⁄2 | 2 |
| TFPI26TX x L | 1 5⁄8 | 1 25⁄32 | 1.7822 | 1.7812 | 1.6133 | 1.6117 | 1.6202 | 1.6164 | 5⁄16 | 1 | 1 1⁄2 | | |
| TFPI28TX x L | 1 3⁄4 | 1 15⁄16 | 1.9385 | 1.9375 | 1.7393 | 1.7367 | 1.7461 | 1.7415 | 5⁄16 | 1 | 1 1⁄2 | 1 3⁄4 | 2 |
| TFPI30TX x L | 1 7⁄8 | 2 1⁄16 | 2.0637 | 2.0625 | 1.8632 | 1.8616 | 1.8713 | 1.8665 | 5⁄16 | 1 | 1 7⁄8 | 2 1⁄4 | |
| TFPI32TX x L | 2 | 2 3⁄16 | 2.1887 | 2.1875 | 1.9881 | 1.9863 | 1.9963 | 1.9915 | 5⁄16 | 1 | 1 1⁄2 | 2 | 2 1⁄2 |
| TFPI36TX x L | 2 1⁄4 | 2 7⁄16 | 2.4387 | 2.4375 | 2.2378 | 2.2360 | 2.2463 | 2.2415 | 5⁄16 | 2 | 2 1⁄4 | 2 1⁄2 | |
| TFPI40TX x L | 2 1⁄2 | 2 11⁄16 | 2.6887 | 2.6875 | 2.4875 | 2.4857 | 2.4963 | 2.4915 | 5⁄16 | 2 | 2 1⁄2 | | |
| TFPI44TX x L | 2 3⁄4 | 2 15⁄16 | 2.9387 | 2.9395 | 2.7351 | 2.7333 | 2.7457 | 2.7393 | 5⁄16 | 2 | 2 1⁄2 | 3 | 3 1⁄2 |
| TFPI48TX x L | 3 | 3 3⁄16 | 3.1889 | 3.1875 | 3.9849 | 3.9831 | 2.9959 | 2.9893 | 3⁄8 | 2 | 3 | 3 3⁄4 | |
| TFPI56TX x L | 3 1⁄2 | 3 11⁄16 | 3.6889 | 3.6875 | 3.4844 | 3.4822 | 3.4959 | 3.4893 | 3⁄8 | 2 1⁄2 | 3 | 3 3⁄4 | |
| TFPI64TX x L | 4 | 4 3⁄8 | 4.1889 | 4.1872 | 4.9839 | 4.9817 | 3.9959 | 3.9893 | 3⁄8 | 3 | 3 3⁄4 | 4 3⁄4 | |

Non-standard lengths can be supplied. If the size you require is not listed please contact our sales dept. We also offer a specialised machining service for low volume non-standard sizes and tolerances.



Lubricated Sliding Bearings



Oil or grease lubricated bearings. Carbon steel shell with sintered bronze layer with a co- acetal polymer layer. Available in metric and imperial sizes from stock.



Dry Sliding Bearings



Self lubricated plain & flanged bearings & strip. Carbon steel shell with sintered bronze layer filled with PTFE. Available in metric and imperial sizes from stock. Also bronze shell versions can be supplied to order.

White Metal Bearings



White metal bearings can be manufactured to order in various material grades.

Plastic Bearings Moulded & Machined



Available in metric sizes from stock. Can also be manufactured in many different types of plastic material to suit various applications. Machined for small quantities and moulded for large quantities.

Standard Wrapped Bearings



Oil or grease lubricated bearings. Carbon Steel shell with sintered bronze lining. Various metric and imperial sizes available from stock.



Ball Bearings



Ball bearings in chrome or stainless steel. ABEC 1, 3 or 5. With or without seals. Various ranges available from stock.

Machined Parts



Standard bearings modified. Custom shafts and bearings manufactured in cast bronze, plastic and other materials.

Cast Bronze Bearings with Solid Graphite Lubrication



Various material specifications are offered. Standard and special shapes are available.



Cast bronze bearings with solid graphite lubrication



All these bearings are made to order. Other shapes can be offered.

Graphite loaded bearings can withstand very high temperatures up to 425 °C (800 °F) as well as cryogenic temperatures down to -200°C (-400 °F) depending on the bronze material and graphite selected. This makes them ideal where conventional lubricants would carbonise. Please contact our technical department to ascertain which would be the most suitable combination to suit your application.

Typical applications are ovens, kilns, dryers, injection moulding machines, dust collectors, louvers and hot conveyors.

These bearings are also ideal in dry environments where contamination is undesirable. Typical applications would be printing, textile, and food machinery, as well as machines for making pills and cosmetic products.

They are also used extensively for wet applications where there is high humidity, or in submersed pumps, textile finishing machinery, lock gates, water turbines, chemical processing and plating applications.

This type of bearing is also useful where the bearings are in an inaccessible location, as they are lubricated for life.

Technical Data

| | |
|-------------------|------------------------------|
| Standard Material | Cu 65%, Zn 25%, Ai 6%, Mn 4% |
| Density | 8 g/cm ³ |
| Hardness | > 210 HB |
| Tensile Strength | 750 N/mm ² |
| Elongation | > 12% |
| Linear Expansion | 1.9 – 10 ⁻⁵ / °C |
| Max Temp | 300 °C (570 °F) |
| Static Load | 100 N/mm ² |
| Max Speed | 15 m/s |
| PV | 200 N/mm ² s m/s |

Other cast bronze materials/specifications are available which can operate up to 425 °C.

Different shapes can be manufactured to suit customer requirements.