

Radial Insert Ball Bearings Housing Units

Our Expertise is Your Benefit

Schaeffler Group Industrial

Quality for every eventuality: Radial insert ball bearings in industry

Radial insert ball bearings are just as widespread in industry as the sales network of Schaeffler Group Industrial and its brands INA and FAG, active worldwide in more than 60 sectors from agricultural engineering and the beverage industry to semiconductor production. This means that there is a wide variety of appropriate design variants and operating conditions.

Expertise for radial insert ball bearings. To us, this means quality, a diversified standard range, tailor-made special solutions and comprehensive service.

With an INA radial insert ball bearing, the customer has quality at their fingertips that has been put to the test and is affordable. This is because behind every bearing are the decades of experience and comprehensive know-how of a company that is represented in every significant industrialized country on the planet. We pass this advantage on to you. We



Leading role – not only in agricultural engineering: INA is the market leader for radial insert ball bearings and housing units in Europe and South America

develop and manufacture catalog bearings and special designs to top international standards of quality for challenging situations or harsh environmental conditions. All according to customer requirements.

Faster, safer and more economical – this is what industry requires of us all. Increasingly powerful machines however, would be inconceivable without robust and reliable bearing arrangements for the moving parts ...

We would be delighted to welcome you as our customer.



Stop rust, save money: Corrosion-resistant flanged housing units are used in the beverage industry



Long stems on a long journey: INA housing units are highly effective in compensating misalignments in conveyor belts

The subtle difference: Why choose INA?

Modern radial insert ball bearings all seem the same on the surface. The same rolling bearing steel or cast iron, similar cages, series according to DIN or JIS standards ... So why should a customer choose INA? This, of course, is a decision you have to make on your own. All we can do is ask you to take a closer look so that the subtle details become more obvious.

Zinc-plated and robust: The three-part seal design

We have developed an unique seal system comprising three components – outer cap, seal lip and inner cap – that covers just about all environmental conditions.

What are the competitive advantages?

- Concentric seal contact means considerably improved sealing and operating life
- Mechanical protection thanks to outer caps extended down towards the inner ring
- Zinc-plated inner and outer caps
- Seal lips for standard applications or for use at high or low temperatures
- Rolled sheet steel seal for secure seal seating and trouble-free relubrication

Tested and patented: Corrotect[®] Coating

Radial insert ball bearings with this patented anti-corrosion coating are an economical alternative to bearings made from stainless steel, without the associated disadvantages such as reduced load carrying capacity.

What benefits does Corrotect[®] offer precisely?

- Bearings remain corrosion-protected for a considerable length of time
- Considerable extension of operating life for housing units
- Inner rings and locking collars are protected against fretting corrosion as standard
- Prevents corrosion creep on the seal contact

Creative and economical: Location methods

You have the choice of five location methods for INA radial insert ball bearings. Standard solutions include eccentric locking collars or set screws, while mounting by means of an interference fit is rarely used.

What are the particular advantages?

- Only from INA: drive slots in the inner ring for compensating shaft expansion
- Adapter sleeves high speeds can be reached since the bearing is fixed concentrically. These bearings are interchangeable with insert bearings of the same size without reduction in load rating.



Effective protection: The three components of the seal design – an example of an R type seal with an enlarged grease reservoir



Say farewell to rust: The electroplated Corrotect[®] surface coating provides very high resistance to corrosion



From our range

Comprehensive catalog range

You will find over 230 series with diameters ranging from 10 to 120 mm in INA and FAG's main catalog. The modular setup of the range guarantees modular solutions for every application. Recent innovations include housing series according to JIS standards and radial insert bearings with square and hexagonal bores, maximum possible grease reservoirs and Corrotect® coating on all surfaces.

Special designs

±5°/±2,5°

We also invest time in smaller lot sizes! For technically challenging applications, we can develop economical special solutions with our customers. This includes, for example, bearings for high speed ranges or for quiet running. In our in-house test center, we test special grease types for use at high and low temperatures and for operation under high humidity.



Constraining forces not welcome: The units are carefully adjusted during mounting so that the housing can align itself correctly

Quality & Service

Complete service for radial insert ball bearings



Industrial bearings to automotive quality: All our catalog bearings are subject to long term load testing in our in-house testing center. All INA products are manufactured in accordance with strict international standards.

With every INA radial insert ball bearing, you benefit from fully tested quality. ISO/TS 16949:2002 is mandatory for all corporate sectors and all locations of the Schaeffler Group worldwide.

Good service is at least as important to us as top quality. A whole series of services is therefore available:

- A network of external sales offices worldwide offering advice
- Comprehensive documentation (catalogs, *medias*[®] professional product selection and information system, 3D models)
- In-house test center
- Calculation service
- Bearing analysis
- Tribology (advisory service on lubricants)

Calculation Service

Imagine that you need to calculate the final drive of an agricultural machine. This means defining transmission elements, analyzing load elements and taking all operating conditions into account. Often this is not easy. Our engineering service can offer you professional help. For example, with **BEARINX**®, the calculation program with a CAD interface. BEARINX® models the entire system. The load on every bearing position can be accurately displayed, calculated, and documented. Simulations reveal performance and power reserves. All this will assist you in quickly finding a cost-effective solution. Just ask us!

In addition, our central calculation department offers expert help with applications by using **FEM simulations**.



FEM simulation of the rupture points or rupture loads of a housing unit during overloading of a bearing unit



FEM simulation model

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