www.rodavigo.net +34 986 288118 Servicio de Att. al Cliente



SETTING THE STANDARD

Our products and services set the standard in high-speed spindles, ball screws, rotary tables and other demanding applications. Our portfolio includes specialized tapered roller and ball bearings produced to precision classes that deliver operating characteristics necessary for the highest performance.

Timken[®] bearings meet or exceed application needs for rotational accuracy, consistency and rigidity. Longer bearing service life translates to more machine uptime and production.

PRODUCT BREADTH

Brands like Timken® and Fafnir® reflect an extensive line of tapered, spherical, cylindrical, ball bearings and mounted units for virtually every machine tool and industrial application. We can offer the right bearing for almost any machine position.

TAPERED ROLLER BEARINGS

Timken® tapered roller bearings have been used for many years in machine tool applications due to their widely recognized advantages in stiffness, load-carrying capacity, precision and reliability over other bearing designs.

As applications have achieved much higher cutting speeds, Timken has maintained the same global accuracy level by developing optimum spindle designs through special internal bearing geometry and innovative bearing designs.

BALL BEARINGS

Ultra-precision equipment requires more than standard bearings can deliver. Timken super precision ball bearings meet the highest industry standards in tolerance levels (including ABEC 9). Designed for machine tool applications, our precision ball bearings offer superior tolerance and performance.

ANGULAR CONTACT BEARINGS

Timken® Fafnir® angular contact ball bearings are manufactured to provide a high degree of rigidity in both axial and radial directions while operating at minimum temperatures for a wide range of speeds and operating loads, leading to more accurate work at a higher production rate.

Our angular contact ball bearings give the machine builder the flexibility required to meet speed and load variations in machine tool applications.

BALL SCREW SUPPORT BEARINGS

Ball screw support bearings with steep contact angles, available in single row, or in housed units, provide high levels of stiffness and simplified installation for the demands of servo-controlled machinery.

ASSEMBLE-TO-ORDER PROGRAM

Our premium customer service is leveraged by our global sales and distribution network. The Assemble-To-Order Program can perform cost-effective quick delivery of a variety of machine tool ball bearings for product not easily found at local distribution centers.

HOW TO USE THIS CATALOG

We designed this catalog to help you find the Timken bearings best suited to your equipment needs and specifications.

This publication contains dimensions, tolerances and load ratings, as well as engineering sections describing fitting practices for shafts and housings, internal clearances and other bearing features. For more information, please use the

Timken Engineering Manual (order no. 10424). It provides valuable assistance in the initial consideration of the type and characteristics of the bearings that may best suit your particular needs.

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TIMKEN

SHELF LIFE AND STORAGE OF **GREASE-LUBRICATED BEARINGS** AND COMPONENTS

To help you get the most value from our products, Timken provides guidelines for the shelf life of grease-lubricated ball and roller bearings, components and assemblies.Shelf life information is based on Timken and industry test data and experience.

SHELF LIFE

Shelf life should be distinguished from lubricated bearing component design life as follows:

Shelf life of the grease-lubricated bearing/component represents the period of time prior to use or installation.

The shelf life is a portion of the anticipated aggregate design life. It is impossible to accurately predict design life due to variations in lubricant bleed rates, oil migration, operating conditions, installation conditions, temperature, humidity and extended storage.

TIMKEN IS NOT RESPONSIBLE FOR THE SHELF LIFE OF ANY **BEARING/COMPONENT LUBRICATED BY ANOTHER PARTY.**

European REACH compliance

Timken lubricants, greases and similar products sold in stand alone containers or delivery systems are subject to the European REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) directive. For import into the European Union, Timken can sell and provide only those lubricants and greases that are registered with ECHA (European Chemicals Agency). For further information, please contact your Timken engineer.

STORAGE

Timken suggests the following storage guidelines for our finished products (bearings, components and assemblies, referred to as "products"):

- Unless directed otherwise by Timken, products should be kept in their original packaging until they are ready to be placed into service.
- Do not remove or alter any labels or stencil markings on the packaging.
- Products should be stored in such a way that the packaging is not pierced, crushed or otherwise damaged.

- After a product is removed from its packaging, it should be placed into service as soon as possible.
- When removing a product that is not individually packaged from a bulk pack container, the container should be resealed immediately after the product is removed.
- Do not use product that has exceeded its shelf life as defined in the Timken shelf life guidelines statement.
- The storage area temperature should be maintained between 0° C (32° F) and 40° C (104° F); temperature fluctuations should be minimized.
- The relative humidity should be maintained below 60 percent and the surfaces should be dry.
- The storage area should be kept free from airborne contaminants such as, but not limited to, dust, dirt, harmful vapors, etc.
- The storage area should be isolated from undue vibration.
- Extreme conditions of any kind should be avoided.

Due to the fact that Timken is not familiar with your particular storage conditions, we strongly suggest following these guidelines. However, you may be required by circumstances or applicable government requirements to adhere to stricter storage requirements.

Most bearing components typically ship protected with a corrosionpreventive compound that is not a lubricant. These components may be used in oil-lubricated applications without removal of the corrosion-preventive compound. When using some specialized grease lubrications, we advise you to remove the corrosionpreventive compound before packing the bearing components with suitable grease.

Be careful in selecting lubrication, however, since different lubricants are often incompatible.

When you receive a bearing shipment, do not remove products from their packaging until they are ready for mounting so they do not become corroded or contaminated.

Store bearings and bearing housings in an appropriate atmosphere so they remain protected for the intended period.



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TIMKEN

WARNINGS



Failure to observe the following warnings could create a risk of death or serious injury.

Proper maintenance and handling practices are critical. Always follow installation instructions and maintain proper lubrication.

Overheated bearings can ignite explosive atmospheres. Special care must be taken to properly select, install, maintain, and lubricate housed unit bearings that are used in or near atmospheres that may contain explosive levels of combustible gases or accumulations of dust such as grain, coal, or other combustible materials.

> Never spin a bearing with compressed air. The components may be forcefully expelled.

A bearing/component should not be put into service if its shelf life has exceeded.

Tensile stresses can be very high in tightly tted bearing components. Attempting to remove such components by cutting the cone (inner race) may result in a sudden shattering of the component causing fragments of metal to be forcefully expelled. Always use properly quarded presses or bearing pullers to remove bearings from shafts, and always use suitable personal protective equipment, including safety glasses.

CAUTION

Failure to follow these cautions may result in property damage.

Do not use damaged housed units.

When fitting the inner ring there should be an equal gap at each joint. If there are no gaps do not proceed.

The products catalogued are application specific. Any use in applications other than those intended could lead to equipment failure or to reduced equipment life.

Use of improper bearing fits may cause damage to the equipment.

Do not use damaged bearings. The use of a damaged bearing can result in equipment damage.

Warnings for this product line are in this catalog and posted on http://www.timken.com/legal-notices/

NOTE

Do not use excessive force when mounting or dismounting the unit.

Follow all tolerance, fit, and torque recommendations.

Ensure proper alignment.

Never weld housed units. Do not heat components with an open flame.

Do not operate at bearing temperatures above 121° C (250° F).

Never interchange components between completed bearing assemblies.

Never use a hammer and steel bar on a bearing for installation or removal. Use only a brass bar or a soft-headed mallet.

Consult your equipment designer or supplier for installation and maintenance instructions.

Never use steam or hot water when cleaning the bearings because these methods can create rust or corrosion.

Never expose any surface of a bearing to the flame of a torch. Do not heat bearing beyond 149°C (300°F).

Product performance is affected by many factors beyond the control of Timken. Therefore, the suitability and feasibility of all designs and product selection should be validated by you. This catalog is provided solely to give you, a customer of Timken or its parent or affiliates, analysis tools and data to assist you in your design. No warranty, expressed or implied, including any warranty of merchantability or fitness for a particular purpose, is made by Timken. Timken products are sold subject to a Limited Warranty.

Every reasonable effort has been made to ensure the accuracy of the information contained in this catalog, but no liability is accepted for errors, omissions or for any other reason.

DISCLAIMER

This catalog is provided solely to give you analysis tools and data to assist you in your product selection. Product performance is affected by many factors beyond the control of Timken. Therefore, you must validate the suitability and feasibility of all product selections.

Timken products are sold subject to the Timken terms and Conditions of Sale, which include our limited warranty and remedy. You can find these at https://www.timken.com/ legal notices/termsandconditionsofsale/.

Please consult with your Timken engineer for more information and assistance. Every reasonable effort has been made to ensure the accuracy of the information in this writing, but no liability is accepted for errors, omissions or for any other reason.