

# Premium Bearings for Aggregate Equipment

Catalog A-1800-I





**Our comprehensive product portfolio of premium products includes:**

*Spherical Roller Bearings*

*Ball and Roller Bearing Mounted Units*

*Tapered Roller Bearings*

*Cylindrical Roller Bearings*

*Radial Ball Bearings*

*Needle Roller Bearings*

*Micro and Miniature Ball Bearings*

*Angular Contact Ball Bearings*

*Automotive Bearings and CVJs*

*Agricultural & Farm Implement Bearings*

*Electric Motor Bearings*

*Machine Tool Bearings*

Whether your requirements are for the mining industry, construction, agriculture or almost any other industry, NTN has the parts to meet your needs.

# ROCK-SOLID BEARINGS FOR AGGREGATE INDUSTRY

## A leader in bearing solutions for the Aggregate Industry

All aspects of the Aggregate Industry present rigorous requirements for bearings. From heavy loading and high-misalignment to extreme contamination, every potential failure mode is present. As a key supplier to top mining, construction, and agricultural equipment OEMs NTN understands the demands of high loading, severe misalignment, and extreme contamination applications. From this knowledge and experience we design and produce our bearings for long lasting performance in these harsh environments.

## One of the broadest product lines in the industry

NTN's core business has always been bearing manufacturing and to this day, NTN is one of the most trusted brand names in the market. Over the years, our extensive experience and in-depth knowledge of bearing applications has translated into continuous growth of our product portfolio.

In addition to products designed for the aggregate industry, NTN manufactures and offers one of the broadest lines of super precision and precision grade ball and roller bearings available. We also offer top-quality mounted bearing units as well as a full line of constant velocity joints for half-shafts and propeller shafts.

## Serving a wide range of industries

NTN bearings are relied upon in the manufacture of automobiles, aircraft, railway cars, and electric motors. In addition, many other industries benefit from NTN's quality, including agriculture, construction and pulp and paper processing machinery.

As one of the world's largest bearing producers, NTN operates ten state-of-the-art plants in the USA and Canada, and over 80% of the products sold in the United States are locally produced. To ensure prompt, off-the-shelf service at any time, anywhere in the country, we make our products available through an extensive network of distributors.

## Superior level of service & support

At NTN, we understand perfectly well that manufacturing excellence alone won't guarantee 100% customer satisfaction. That's why we offer industry leading sales and technical support and assistance, as well as a variety of training programs to suit your specific needs.

We are one of the few manufactures that have our own customized on-site bearing maintenance training program. The NTN Technical Training Unit (TTU) is a mobile training vehicle offering a variety of courses for all maintenance issues.

And, in case you need immediate assistance, our responsive support team is available 24/7 and is as close as your telephone or internet. You can also check inventory or place orders using our Distributor Online Ordering System (DOL).

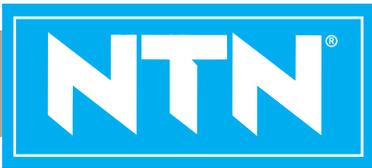
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**BOWER**<sup>®</sup>  
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## Shaker screen spherical roller bearings

One of the toughest industrial equipment applications for bearings is vibrating screens or shaker screens. The environments of these pieces of equipment are such that they touch on 3-key areas that primarily lead to failure.

First, the simple shaking action of the screen requires bearings to have a very high load and speed rating; additionally, this loading is variable due to the acceleration and deceleration of the screen itself and the impact from the material as it moves through the screen.

Second, not only do these loads dictate the bearing to have a high capacity, but it must also have misalignment capabilities. As these loads are generated by the screen and the material, the shafts and housings associated with the bearing bend, forcing the bearing to adjust to this movement.

Last, like all equipment in the aggregate industry, the environment of shaker screens is very dusty and dirty, so the bearing must operate smoothly and generate minimal friction.

To help our **end-users increase their up-time**, NTN has developed a special line of spherical roller bearings specifically designed for the severe applications found in shaker screens and all vibrating equipment.



**NTN Shaker Screen Sphericals** have distinct features that make them ideal for vibrating applications:

*A solid brass cage, that is resistant to vibrations and its associated failures*

*Higher standard load rating enhances bearing life*

*Tighter tolerances ensure proper operation in vibrating applications*



# AGGREGATE CRUSHING & SORTING

## Bearings for Crushers

Just like shaker screens, crushers are one of the most demanding applications for bearings. In crushing equipment, the heavy loading and extremely dirty and dusty environment are the primary causes for bearing failure. Additionally, crushers are key pieces of equipment to any aggregate operation. Because of this, bearing reliability and long lasting performance are vital requirements for every replacement.

As one of the world's largest manufacturers of premium bearings, NTN has developed an extensive line of products designed for crushing equipment.

### *Spherical Roller Bearings*

### *Tapered Roller Bearings*

### *Heavy-Duty Spherical Roller*

For the most popular types of **crushers**, NTN has a highly engineered bearing to meet all of your replacement requirements:

#### **Jaw Crusher**

*Standard spherical roller bearings, B and E type*

*Specialized spherical roller bearings for vibrating applications*

#### **Impact-Type Crusher**

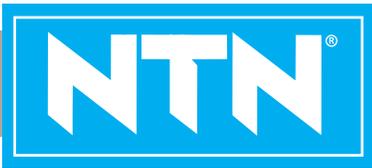
*Spherical roller bearings, standard and specialized for vibrating applications*

*Heavy-duty mounted units, SRB with solid-housing*

#### **Cone Crusher**

*Specialized tapered roller bearings (case-carburized)*





## Heavy-duty spherical roller bearing mounted units

Heavy contamination has been and will always be a major problem in the Aggregate Industry. With SAF units the current sealing arrangement often leads to contamination, which ultimately leads to premature failure. This then forces equipment to be shut-down for repairs, increasing overall costs and cutting dollars out of the bottom-line.

Previously, the only way to prevent these failures was to improve the re-lubrication schedules. By flushing out the contaminants maintenance personnel are able to overcome the inadequate sealing arrangement; however, this can drastically increase lubrication costs.

NTN has solved this problem with Heavy Duty Spherical Roller Bearing Mounted Units, SPAW, SPW, and SFCW type. These units utilize contact seals to combat heavy contamination issues. The spring-loaded contact seals offer better contamination protection and less grease consumption, while offering greater misalignment capability. Additionally, these units offer the same base-to-shaft-center height and bolt hole positions as SAF units for easy replacement. Standard one-piece ductile iron housing offers better shock loading characteristics and quicker mounting and dismounting, when compared to SAF units.

If your problems with heavy-duty mounted units are unacceptable downtime and maintenance costs, then NTN's SPAW, SPW, and SFCW type units are the only solution.



### Features & Benefits:

*Factory sealed, lubricated, and assembled*

*Available with covers, including taconite service seals for severe applications*

*Allows for quick replacement of bearing insert*

*Sturdy one-piece housing*

*Phosphate coated insert bearing*



# CONVEYOR APPLICATIONS

## Ultra-Class™ premium bearing units

For light to moderately loaded conveyor applications, NTN has developed a premium line of mounted units, **Ultra-Class™**. These feature rich mounted units, offer a quality and a dependability that no OEM mounted unit or other replacement can offer.

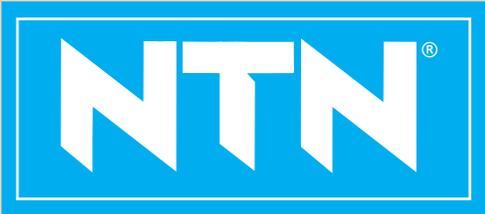
First, the insert is surrounded by a **heavy-duty solid base housing**. Solid base housings can take more abuse, reduce the effects of vibration, and can even protect the unit from over-tightening of the mounting bolts.

Additionally, these units come with a **permanent metallic name plate**, which displays the complete P/N, so identifying parts on the shelf and on equipment has never been easier.

Next, to lock everything down, these units offer an NTN exclusive, **Ball point set screw**. This type of set screw is superior to cup point, with better holding power and reduced shaft damage.

Lastly, these units are constructed around a **premium electric-motor grade insert bearing**. These inserts offer a molded rubber contact seal with flinger that provides exceptional protection from contaminations. These premium mounted units are designed to offer long lasting reliable performance no matter the conditions.





# Premium Bearings for Aggregate Equipment



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