

Loyal bearings for each of your construction equipment

Loyal will advise you and identify the bearing solutions best suited to your construction equipment.

Excavators, wheel loaders, pavers or concrete mixers-- building equipment needs to integrate optimal efficiency and accuracy. In addition, with increasing energy expenditures, high efficiency levels are important and emission requirements need to be satisfied.. This requires high-performance tapered Roller Bearing and High-reliability Cage-equipped Thrust Ball Bearing. Faced with all these challenges, the construction machinery industry can rely on Loyal know-how, application experience and long history in developing innovative products.

## Spherical Roller Bearings

Bearing are expected to reduce maintenance costs and enhance performance for a variety of equipmng. Loyal spherical roller bearings satisfy these requirements by fully utilizing Loyal's experience and expertise to deliver longer life and higher limiting speed.

### Features

Compared to the conventional EA Series:

Bearing life

Maximum

2  
times

Increased dynamic load rating to maximum of 25%

Limiting speed

Maximum

20%  
higher

#### Outer Ring

High-temperature operability (dimensional stability) and lubrication groove and holes

#### Cage Flange

High limiting speed

#### Rollers

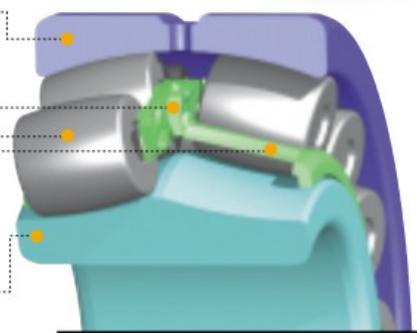
Increased size and number

#### Cage

High-strength pressed steel with special surface treatment

#### Inner Ring

High-temperature operability (dimensional stability)

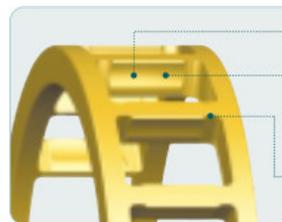


Loyal bearings are available with inner bore dimensions ranging form 40 mm to 130 mm

EM Series (machined cage)

### Features

Compared to the Loyal's conventional type:



High precision cage

#### Advantages of a roller-guided cage

- Trouble-free packing of grease
  - Improved oil flow
- Greater accuracy of the roller guidance achieved through special pocket profiling
- Large pocket corner radii relieve stress concentrations on the cage

Series offers bearing inner bore dimensions ranging from 25 mm to 200 mm

Tapered roller bearings utilized in the travel decrease equipments of building and construction equipment such as hydraulic excavators are utilized in extremely extreme conditions that consist of heavy loads and high-impact loads. This is even more so the case in Construction Machinery market, where construction machinery is often used continuously for long hours and over long stretches of rough roads. Construction Machinery market also pose unique challenges in terms of the poor precision of the parts surrounding the bearing as well as the lack of experience workers have in regard to handling bearings.

## HR Series Tapered Roller Bearings

The HR series of high-load capacity, standard-size tapered roller bearings offer high-load capacity for boosting the performance in diverse applications.



### Features

Optimal cage design allows increased size and munber of rollers

Higher load-carrying capacity and loger operating life

In response to this situation, Loyal introduced state-of-the-art, high-precision machining technology in order to achieve the local production of high-quality bearings at a cost-competitive level with shorter lead times and Develops Tapered Roller Bearing for Construction Machinery Travel Reduction Gears. Loyal Tapered Roller Bearing has a higher level of reliability than the conventional bearing. This bearing was locally sourced and produced to make it possible to provide a steady supply of the cost-competitive, high-quality, short-lead-time bearings that are in demand in Construction Machinery market.

## EW/EM Series Cylindrical Bearings

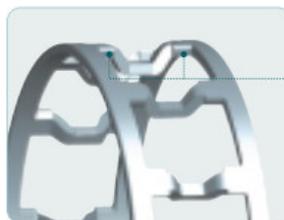
The EW and EM series of high-load capacity, standard-size cylindrical roller bearings deliver outstanding performance across a wide range of applications. High load capacity is achieved by using more rollers than conventional bearings for today's needs that provide longer service life and low-noise and low-vibration performance through an optimally designed one-piece cage with high rigidity and low wear.



EW Series (pressed cage)

### Features

Compared to the Loyal's conventional type:



Roller cage guide face

Series offers bearing inner bore dimensions ranging from 25 mm to 65 mm

### Product Features

Robust bearings of premium quality for Hydraulic excavators, transmissions, road construction and repair equipment, hydraulic pumps and motors, axle bearings for rolling stock

#### 1. Higher reliability and longer life

In order to prevent a decrease in bearing life due to the harsh usage conditions, Loyal applied optimal crowning to the outer and inner raceways as well as the roller contact surface to suppress edge load from occurring.

#### 2. Reduced the stress exerted on the ribs

Travel decrease equipments are frequently exposed to high effect due to driving on rough roadways. This can trigger a lot of tension to be put in onto the rib of the bearing's inner raceway, which in turn can trigger the rib to break and ultimately break. In this case, the automobile in concern will no longer have the ability to run. In reaction to this circumstance, Loyal enhanced the shape of the roller edges to minimize by 11.7% the tension applied on the ribs.

#### 3. Application of a high-reliability cage

The traditional cage sustained big levels of cage load and duplicated tension when ball lag took place, which in turn would in some cases lead to fracturing of the steel cage. As a countermeasure to this, the brand-new bearing makes use of a plastic cage, which is resistant to duplicated tension, to additional boost the dependability of the cage under high load conditions.

### Features

Achieves longer bearing life even under harsh conditions with excellent resistance to wear, seizure, and heat

