

The history is cornerstone of the present time
as well as challenge to the **future**



ZKL Bearings for the Mining Industry

Bearings for the Mining Industry



Comprehensive Product Range for Industrial Applications

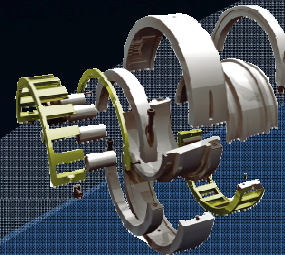


Wind
turbines

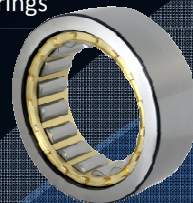


Buildings &
structures

Split bearings



Cylindrical
roller bearings



Cylindrical
roller bearings



Ball
roller bearings



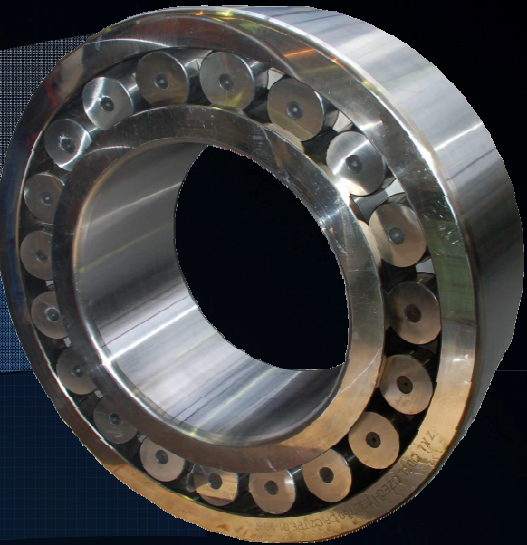
Tapered
roller bearings



Spherical plain
bearings



Spherical
roller bearings



Large size spherical roller bearings with
outside diameter up to 1600mm

Energetic

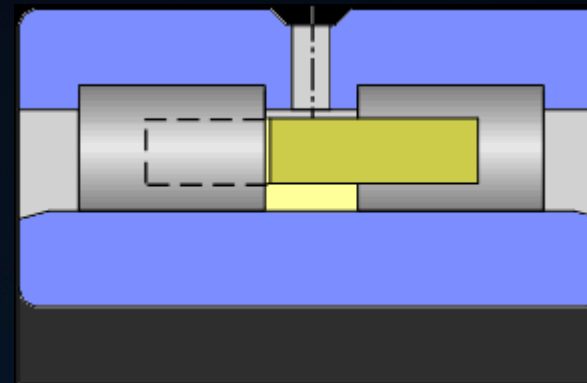
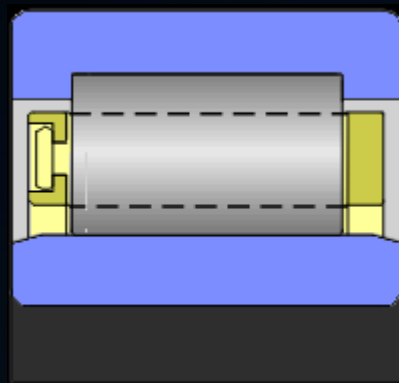
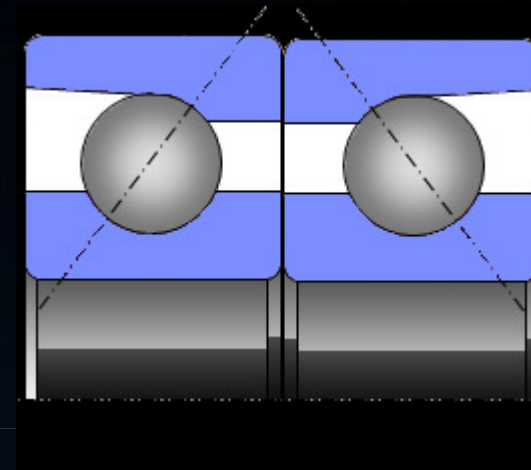
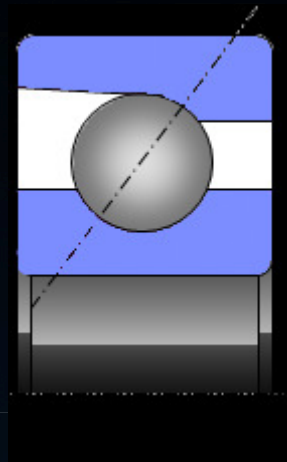
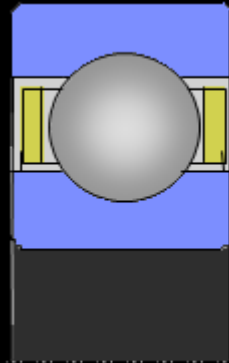


Gearboxes



ZKL GROUP

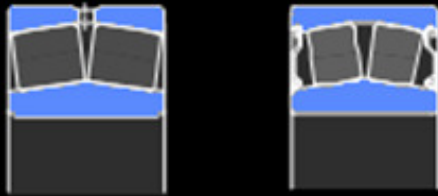
Standard Bearings for Mining Industry



ZKL GROUP

Standard Bearings for Mining Industry

Spherical roller bearings



Spherical roller thrust bearings



Split cylindrical roller bearings



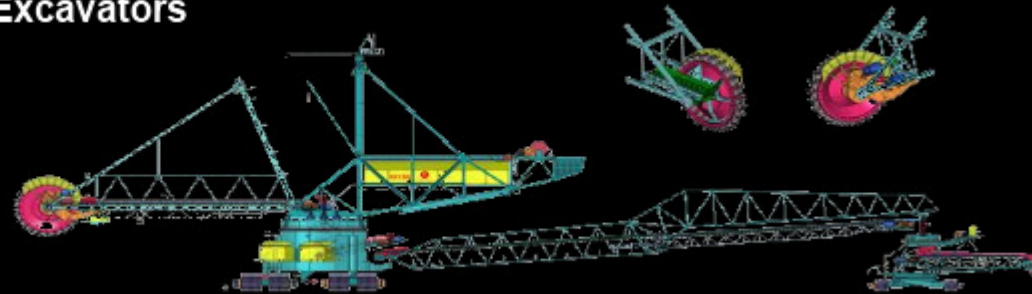
Split spherical roller bearings



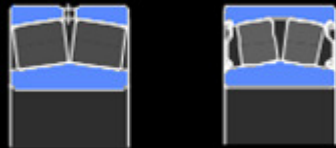
ZKL GROUP

ZKL Bearings for the Mining industry

Surface Mining Excavators



Spherical roller bearings



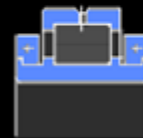
Split spherical roller bearings



Spherical roller thrust bearings

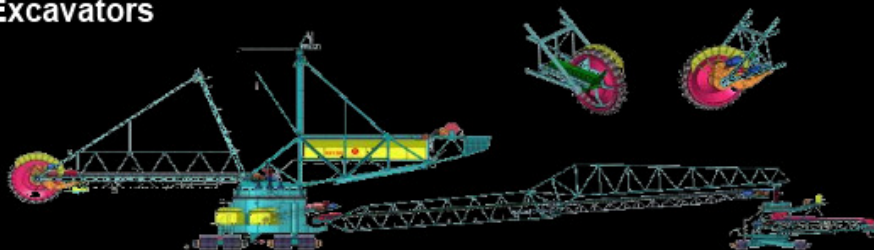


Split cylindrical roller bearings

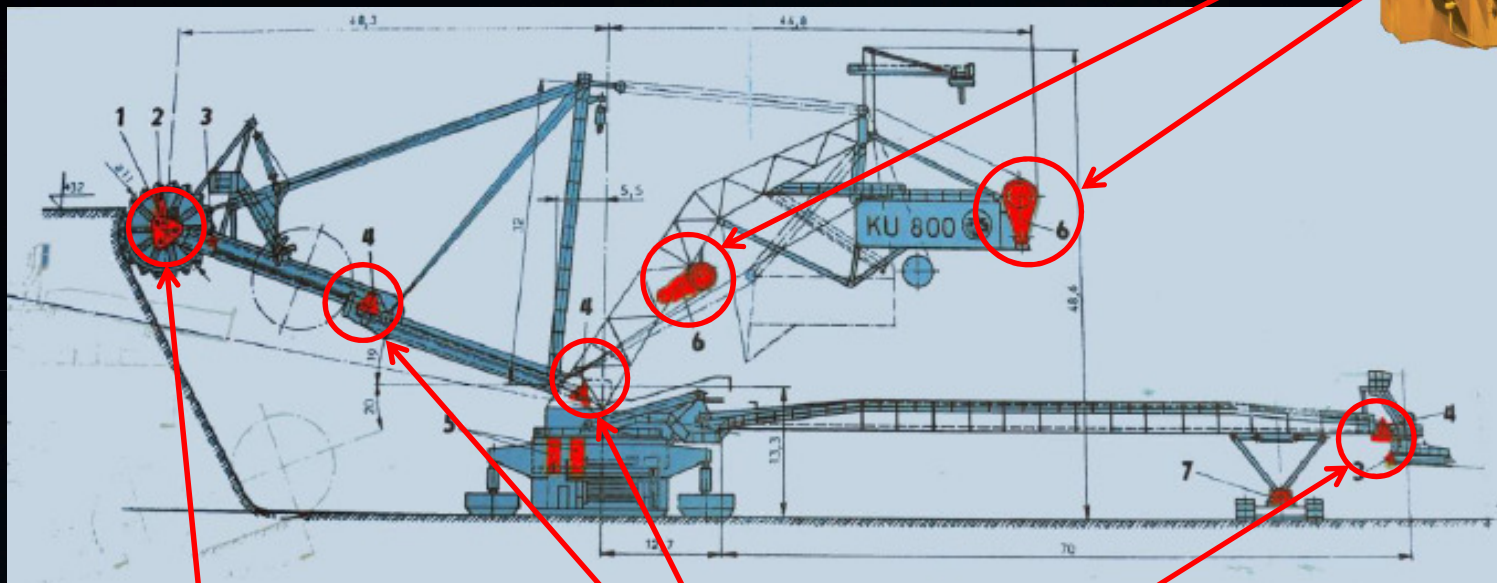


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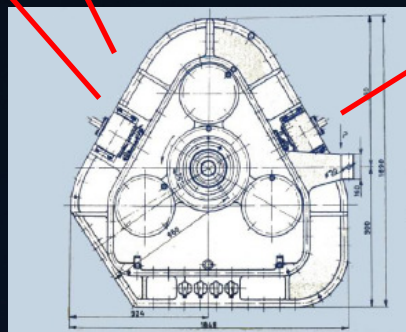
Surface Mining Excavators



Gearbox of lifting boom drive



Planetary transmission of drive of wheel



Planetary transmission of drive of belt

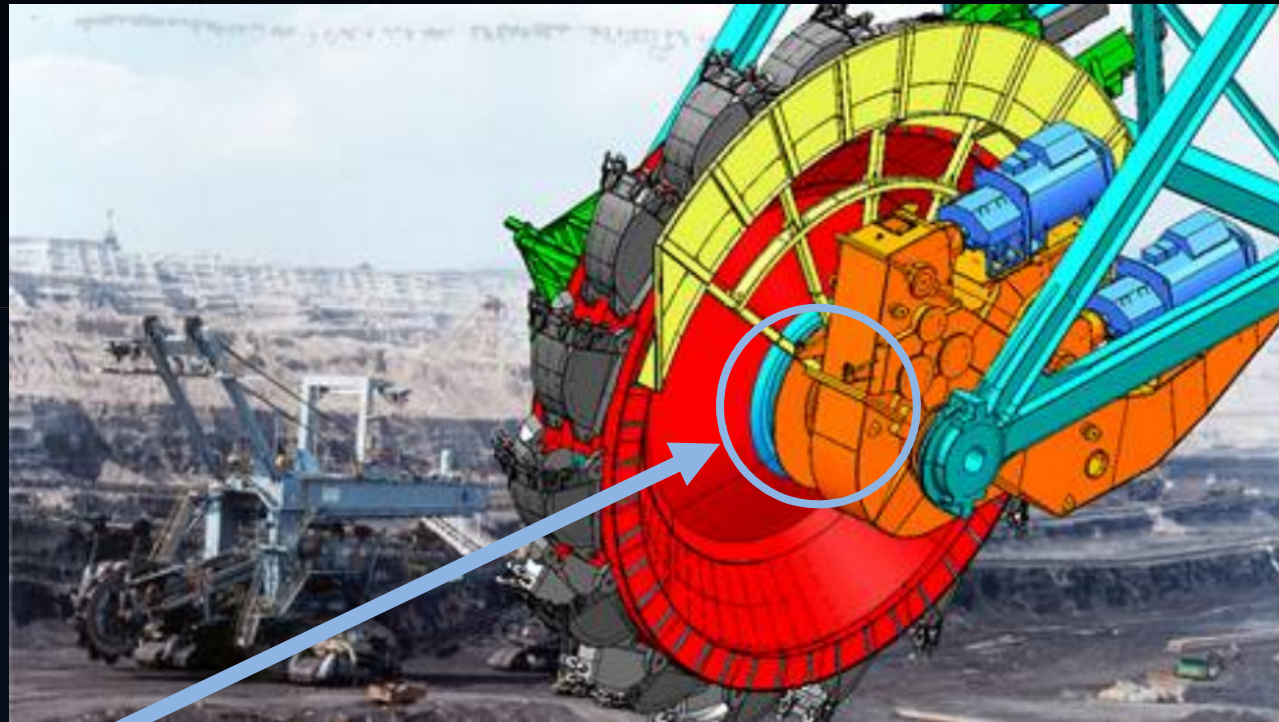
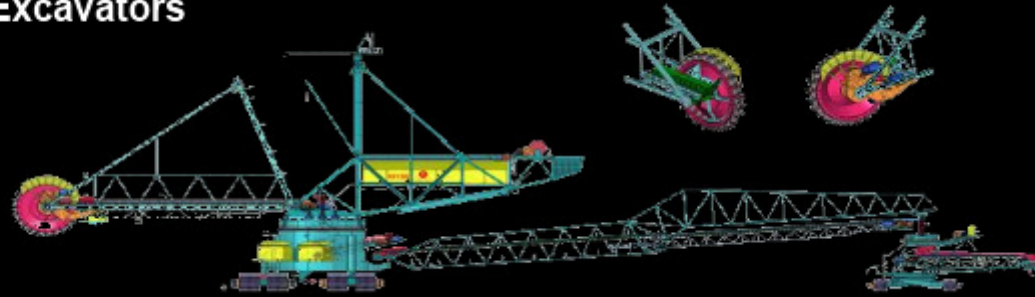
Application of ZKL Bearings in main gearboxes:

Spherical roller bearings Series 239, 240, 241
Cylindrical roller bearings NU, NJ
Special roller bearings PLC



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Surface Mining Excavators



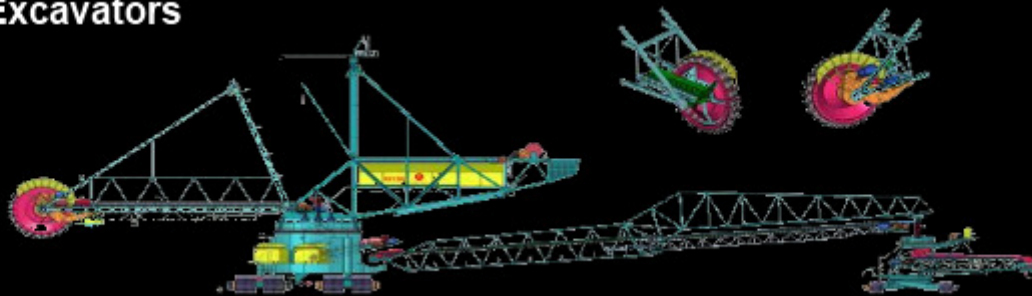
Application of ZKL PLC 512 – 37 in excavator KU 800

Special Split Spherical Bearing

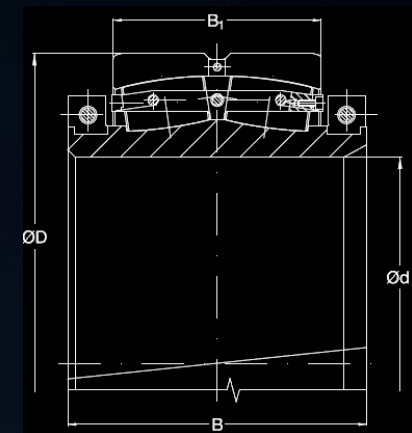
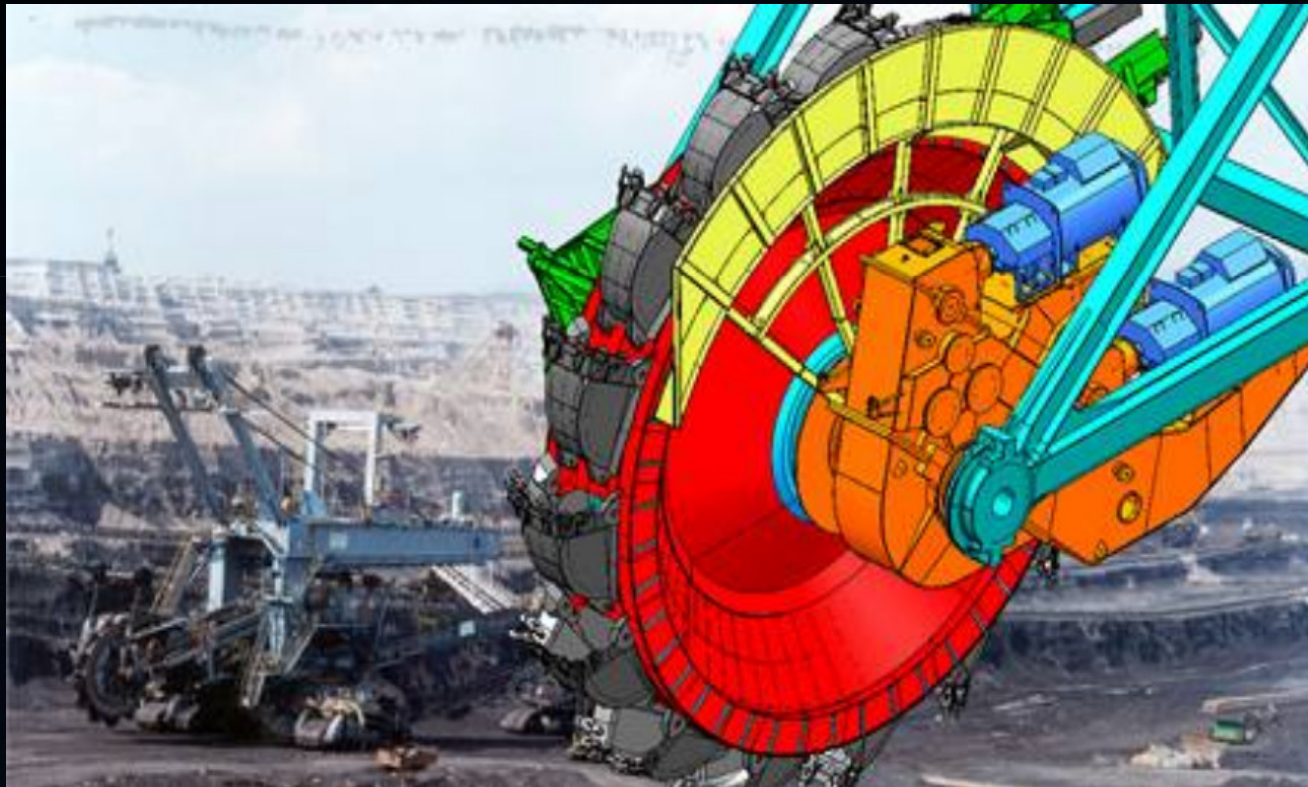


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Surface Mining Excavators



**ZKL split bearing
PLC 512-37**



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Details of ZKL Split Bearings



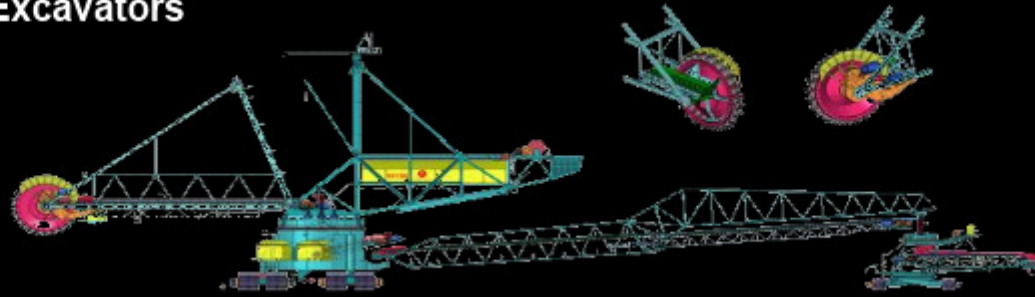
Advantages:

- easy mounting
- costs saving
- development and production according to customer requirements
- delivery time 4-5 months from order



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Surface Mining Excavators



Mounting process of PLC 512-37 on excavator KU 800 in surface mine Tušimice

Placement:

- main shaft of wheel

Details about shaft:

- length 10,5m
- weight 10t including bearings

Details about bearing

- split spherical roller bearing
- outer diameter 1000mm
- weight 1220kg



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ZKL Bearings for the Mining industry

Power Loaders



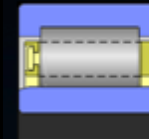
Spherical roller bearings



Split spherical roller bearings



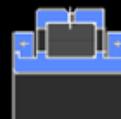
Cylindrical roller bearings



Spherical roller thrust bearings



Split cylindrical roller bearings



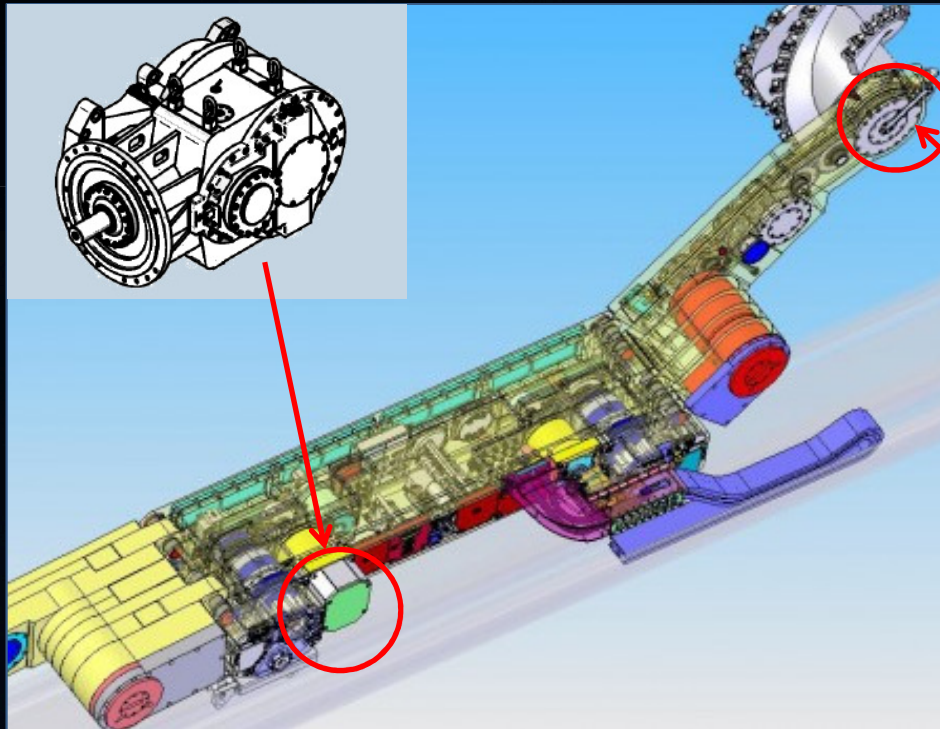
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Power Loaders

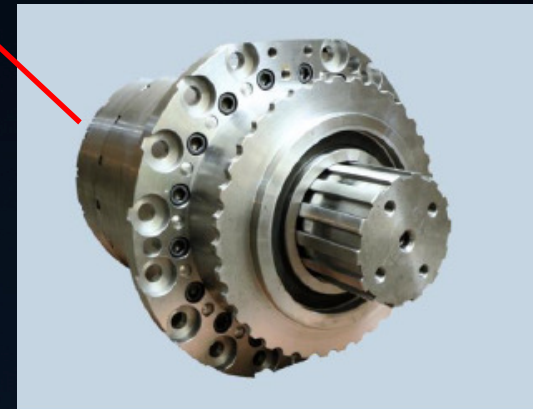


Application of
ZKL Bearings
in planetary
gearboxes:

Transmission of drive of comb conveyor



Spherical roller bearings Series 239, 240, 241
Cylindrical roller bearings NU, NJ
Special roller bearings PLC



Planetary gearbox for turning of
head of mining combine



ZKL GROUP

ZKL Bearings for the Stone treatment making process

**Transport -
Containers**



Screens



Crushers



Belt Conveyors



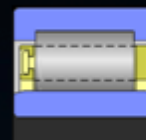
Spherical roller bearings



Split spherical roller bearings



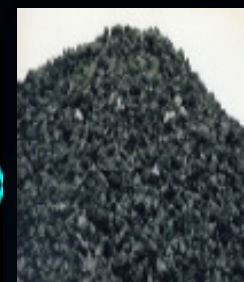
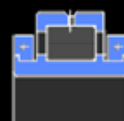
Cylindrical roller bearings



Spherical roller thrust bearings



Split cylindrical roller bearings

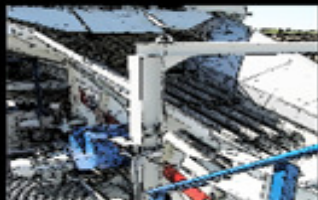


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Transport - Containers



Screens



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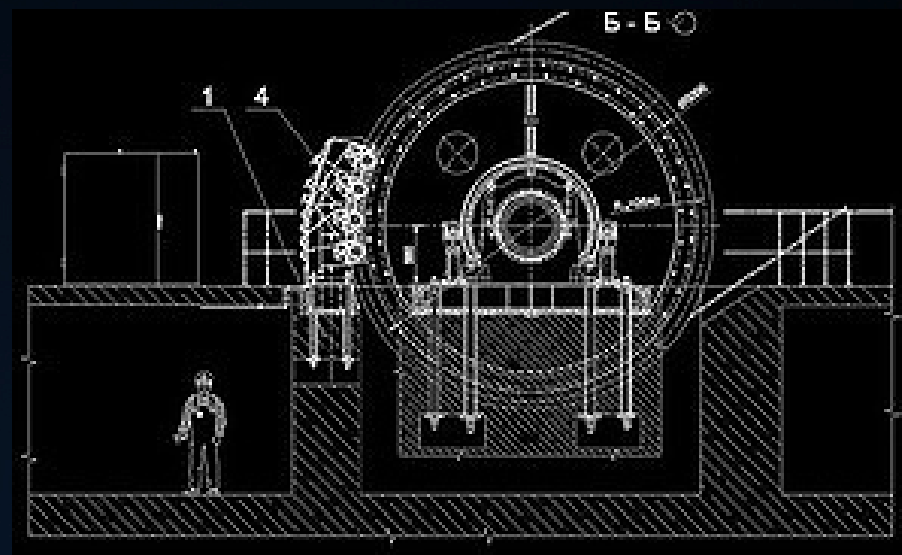
Transport - Containers

Application of ZKL PLC 512-39 in deep coal mine Darkov

Bearing type: Special Split Spherical roller Bearing

Dimensions: - outer diameter 1150mm

- weight 1710kg

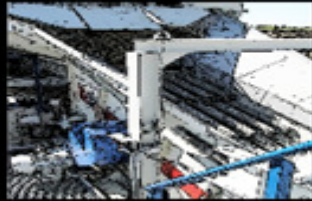


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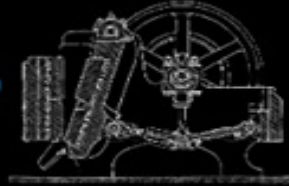
**Transport -
Containers**



Screens



Crushers



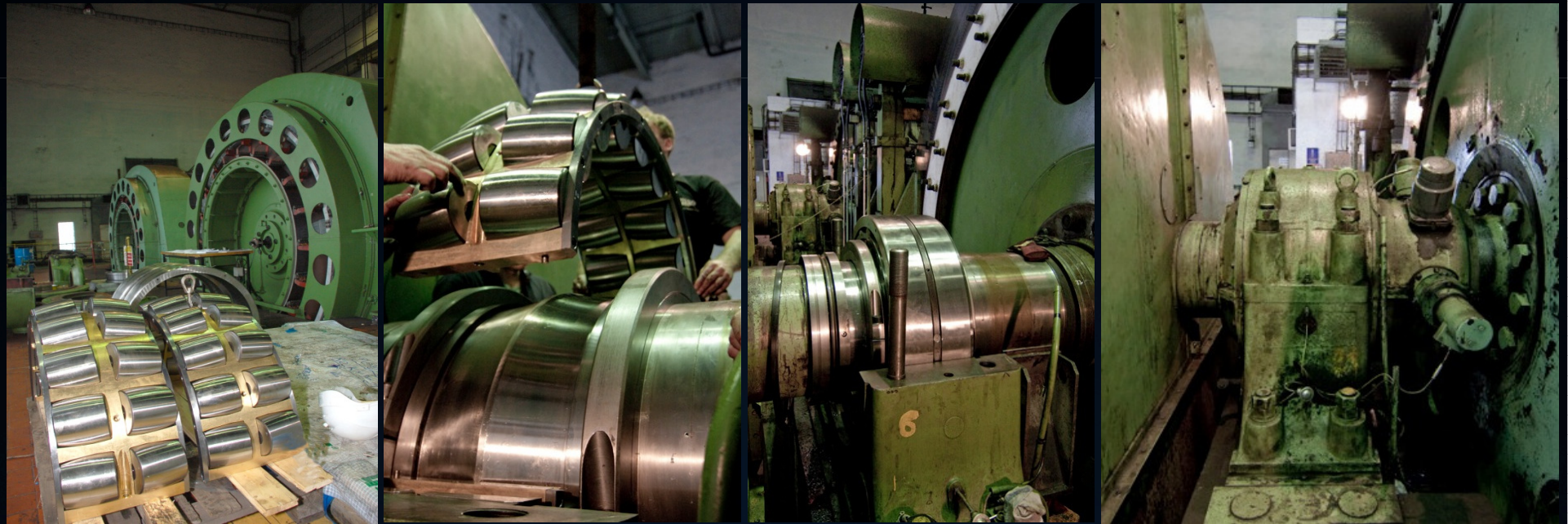
Belt Conveyors



Transport - Containers

Mounting process of ZKL PLC 512-39

Bearing is placed on the shaft of main transport elevator in deep coal mine Darkov which is for transporting coal from deep around 1000m. This special type of bearing replaced in mentioned application standard FAG bearing.



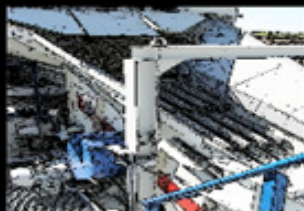
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ZKL Bearings for the Stone treatment making process

**Transport -
Containers**



Screens



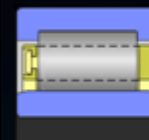
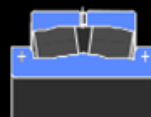
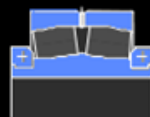
Crushers



Belt Conveyors



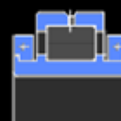
Spherical roller bearings Split spherical roller bearings Cylindrical roller bearings



Spherical roller thrust bearings



Split cylindrical roller bearings

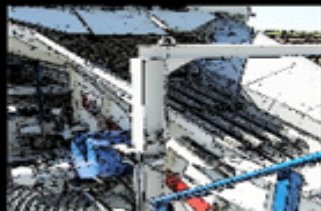


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**Transport -
Containers**



Screens



Crushers



Belt Conveyors



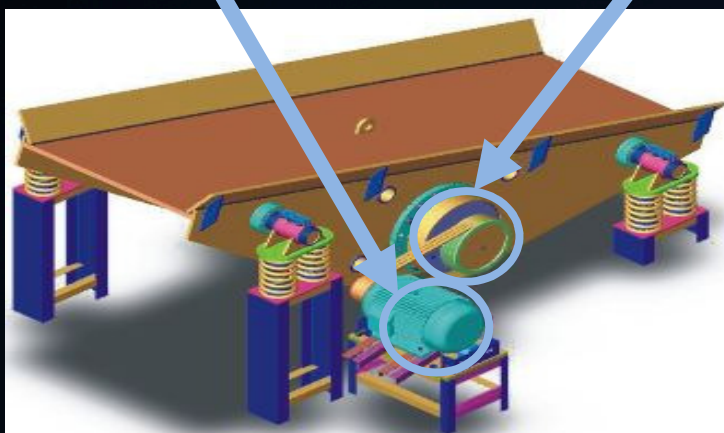
Screens

Spherical roller bearings Series 239, 240, 241

Spherical roller bearing for vibration machines serie 223 EMHD2

Ball bearings serie 6xxx,
cylindrical roller bearings NU

Spherical roller bearing ZKL
22319EMHD2



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ZKL Bearings for the Stone treatment making process

**Transport -
Containers**



Screens



Crushers



Belt Conveyors



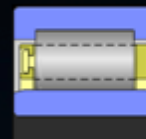
Spherical roller bearings



Split spherical roller bearings



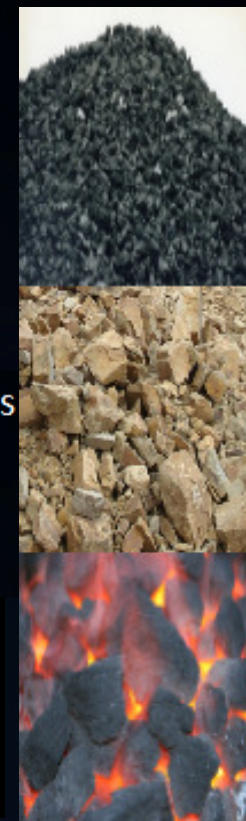
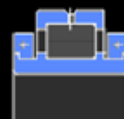
Cylindrical roller bearings



Spherical roller thrust bearings



Split cylindrical roller bearings

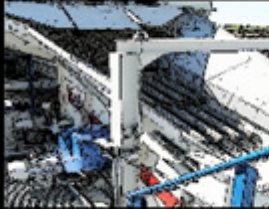


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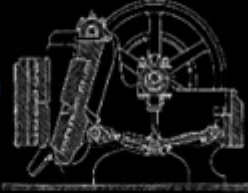
Transport -
Containers



Screens



Crushers



Belt Conveyors

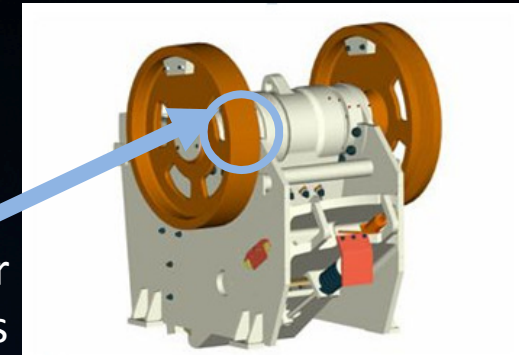


Crushers

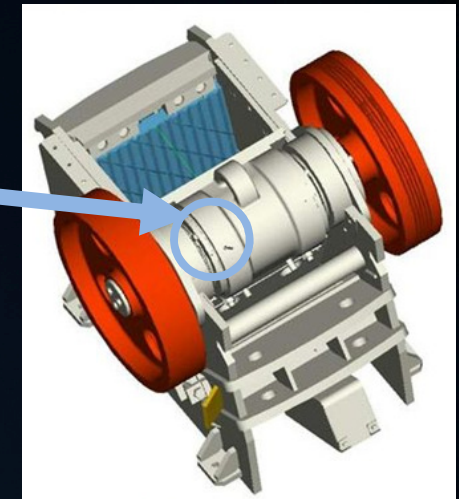
Stone crushers are widely used in mining, metallurgy, construction, highway, railroad, etc.

Spherical roller bearings series

230, 231, 240, 241



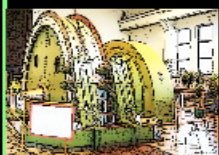
2x 23172KW33MC3
2x23264W33MC3



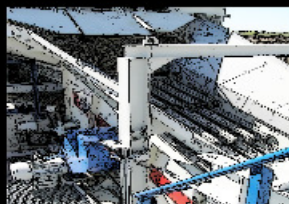
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ZKL Bearings for the Stone treatment making process

**Transport -
Containers**



Screens



Crushers



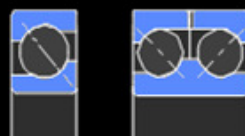
Belt Conveyors



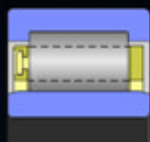
Spherical roller bearings



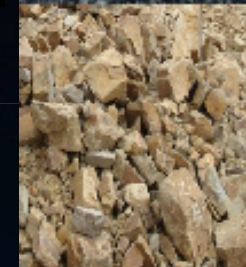
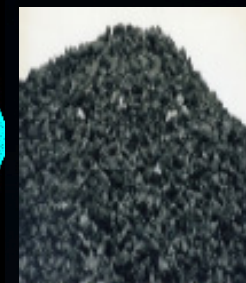
Angular contact ball bearings



Cylindrical roller bearings

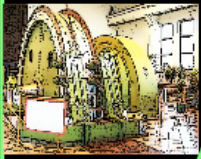


Deep groove ball bearings

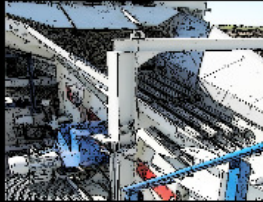


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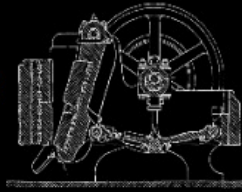
**Transport -
Containers**



Screens



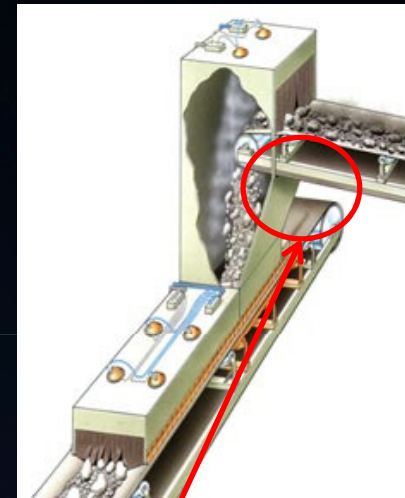
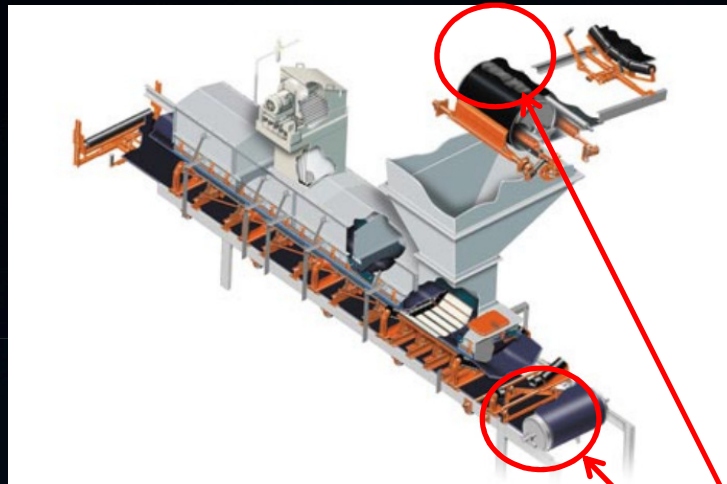
Crushers



Belt Conveyors



Belt Conveyor



ZKL Bearings in main gearboxes:

spherical roller bearings series 239, 240, 241
cylindrical roller bearings NU, NJ

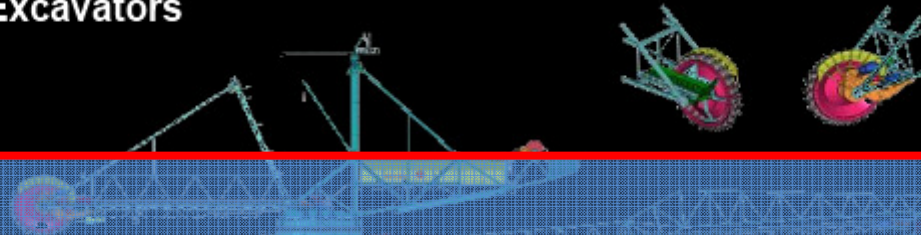
ZKL Bearings in belt conveyor:

spherical roller bearings series 222, 223



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Surface Mining Excavators



Various Application ! Different Bearing Designs !

The more important
to select the right bearing
for a certain application



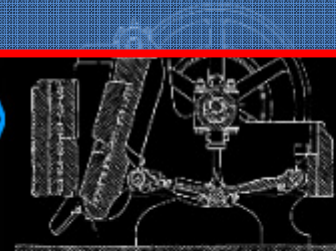
Transport -
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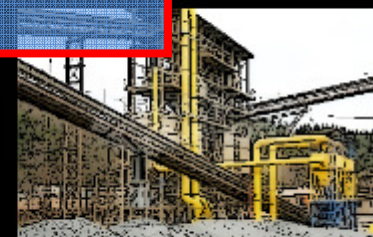
Screens



Crushers



Belt Conveyors

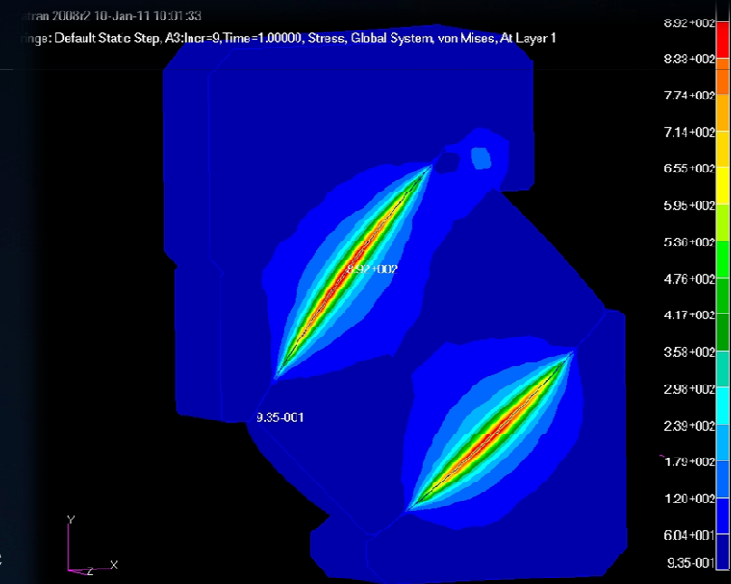


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Application Engineering

- Customer support in selection and calculation of bearings
- Application specific bearing designs, intensive product support, complete product range
- Support for selection of lubrication and fits
- Application specific mounting instructions
- Customer support on the spot
- Handles application related training and presentations

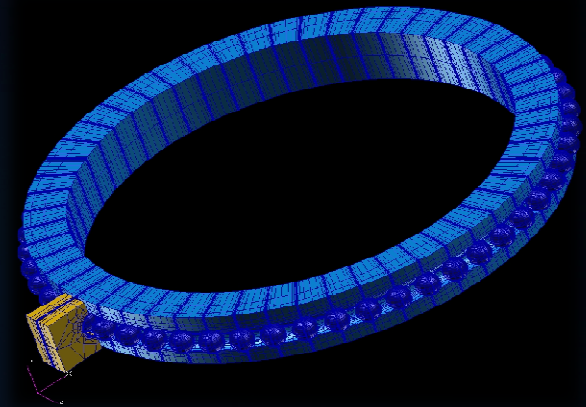
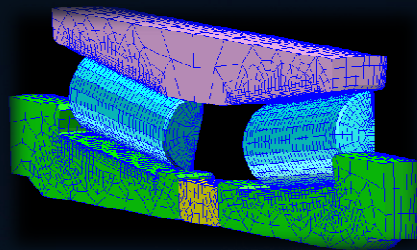
Construction optimization of the ring raceways of large-size bearings



ZKL GROUP

Research and Development

- **New materials**
- **Hybrid bearings** with steel rings and ceramic balls
- **Special rolling bearing coatings** to ensure current insulation and increase resistance to wear and corrosion
- **Grease test rigs** for testing the service life, friction and wear of rolling bearing greases
- **Special life calculation methods** which take into account various influencing factors



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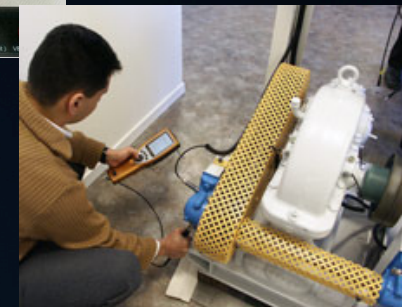
Diagnostics

Most common types of bearing damage which can lead to shortened life of the bearings or applications are often caused by:

- improper maintenance procedures
- improper installation and setup
- inadequate lubrication

Don't solve immediate problem only by simple installation of the new bearings - solve cause of bearing failure.

We are able to extend bearing life, increase productivity and reduce maintenance costs by identifying and resolving issues around the selection of bearings, mounting, lubrication and applications.



ZKL GROUP

Lubrication

ZKL recommend to use special lubrication systems to avoid following failures:



Advantages:

- Your machines will be maintained in their best lubrication condition
- You will make the lubricating process simpler
- You will save money by reducing of the consumption of expensive lubricants

Portable instrument for monitoring and control of machine lubrication



SAVE OUR ENVIROMMENT!
SAVE YOUR MONEY!



- Control of lubrication process
- Checking of correct lubrication
- Checking of bearing condition
- Stethoscope function - „listening of machine noise“
- Simple operation



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Testing

ZKL own testing laboratory in Brno

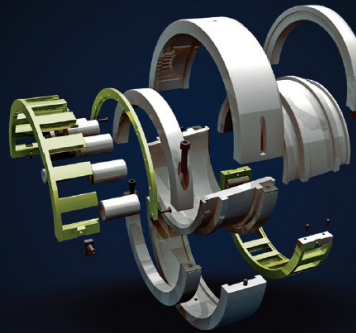


Testing of competitors bearings

- Basic dynamic load tests
- Limiting speed frequency tests
- Metallographic tests



Catalogues



ZKL CROSS-SPLIT SPHERICAL AND CYLINDRICAL ROLLER BEARINGS



ZKL LARGE-SIZE AND SPECIAL BEARINGS
NEW TECHNOLOGICAL OPPORTUNITIES



ROLLING BEARINGS



ZKL - web pages



The history is cornerstone of the present time as well as challenge to the future

NEWS MANUFACTURING CATALOGUE FOR DESIGNERS SALES NETWORK PARTNERS CAREER ABOUT US CONTACTS

CATALOGUE

Bearings

Automotive parts



Bearings

News in our offer

New

Ball Bearings



Historie je základem současnosti a výzvou pro budoucnost

CATALOGUE NEWS SALES NETWORK PARTNERS CAREER ABOUT US CONTACTS

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ZKL

ZKL is the biggest manufacturer of large-scale spherical-roller, special and split bearings in Central Europe.

Compact information's about our you should find on our web pages: www.zkl.cz

▶▶ News

▶▶ Annual reports

▶▶ Catalogue and business information's

▶▶ Constructor manual

▶▶ Contact information's

▶▶ ... and more information's



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