



Maintenance solutions for mines and quarries












Built for harsh environments



Brands of
NTN Group

Main applications in mines and quarries

Mining and quarrying operations put extreme stress on mechanical equipment. Bearings, exposed to dust, humidity, and heavy loads, are often the first components to fail. Our goal is to help you maintain production, reduce downtime, and optimise maintenance costs.

Conveyors	Crushers Grinders	Screeners
Transport of materials	Particle size reduction	Material classification
		
<p>SHOCKS </p>		
<p> Low</p>	<p> Very high</p>	<p> High</p>
<p>VIBRATIONS </p>		
<p> Low</p>	<p> High</p>	<p> Very high</p>

 Low  High  Very high

Common challenges

- **Environmental:**
dust (abrasive), humidity, temperature variations
- **Mechanical:**
misalignment, high loads, aging equipment (often more than 20 years)






Solutions for conveyors

Most conveyors use open spherical roller bearings with steel cages. These are vulnerable to contamination, even with sealed housings.

Recommended bearing: ROX

This innovative and patented solution significantly reduces premature wear and increases bearing life by more than 2 times. In addition, grease consumption is reduced by more than 50%.

	Standard EA Open	ROX EA...ZZ With deflectors	EA...EE With seals
			
OUR RECOMMENDATION	★	★★★	★★
Description	Steel cage Open sides	Nitrided steel cage Shields on both sides	Steel cage NBR seals on both sides
Easy mounting	● Very high	● Very high	● Low
Clearance control	● Very high	● Very high	● Very low
ISO compatibility	● Very high	● Very high	● Very low
Misalignment possible for maintenance operations and under working conditions	● Very high	● Very high	● Very low
Service life	● Low	● High	● Very high
Grease retention	● Low	● High	● Very high
Protection against dust and liquid	● Very low	● High	● Very high
Temperature range	● Very high	● Very high	● Low
Limiting speed	● Very high	● Very high	● Low

● Very high performance ● High performance ● Low performance ● Very low performance

Recommended housing: SNC plummer block housing

A precisely machined housing is critical to ensure bearing performance.

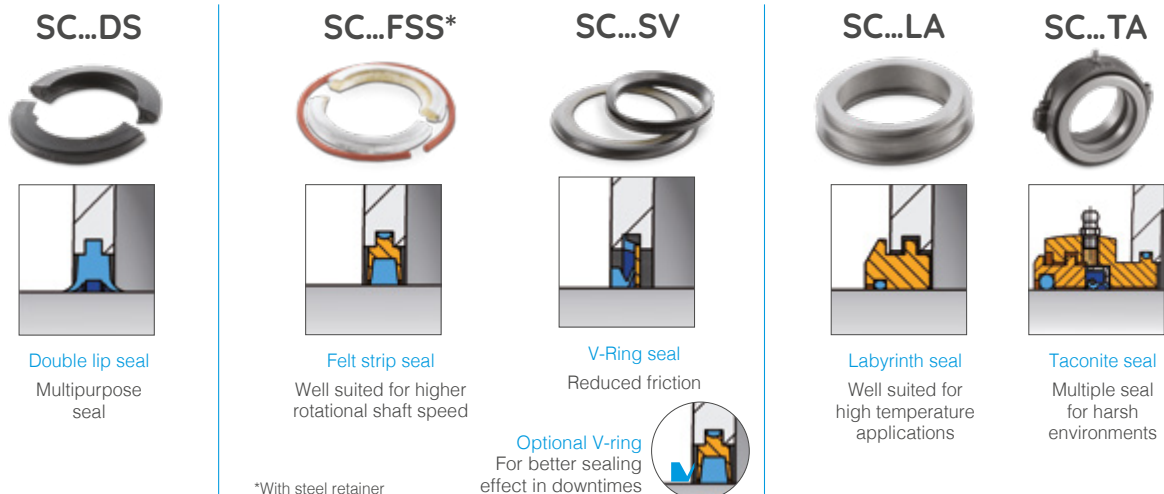
Our SNC plummer blocks offer:

- **High rigidity:** reinforced base for better stability
- **Optimised lubrication:** grease flow design prevents stagnation
- **Pollution control:** purge system recommended to flush out contaminants in the bearing
- **100% interchangeable:** with plummer blocks of premium market players



A wide range of sealing solutions

Our bearing solutions offer a wide range of interchangeable seal variants, engineered to meet the demanding conditions of mining and quarrying applications.





Recommended sleeve: MagicSleeve

Dismounting standard sleeves can be time-consuming for axle maintenance.

Our unique and patented MagicSleeve system makes removal fast and easy: no hammer, grinder, or torch needed. MagicSleeve is coated with phosphate which procures better corrosion resistance.

BENEFITS

- **Saves time:** bearing dismounting realised 80% faster (5 min maximum instead of 25 min)
- **Decreases effort:** can be removed simply with a standard key without any constraint
- **Reduces downtime:** 20% reduction in conveyor maintenance time




	Standard	Coming soon MagicSleeve
	H3XX 	HD3XX 
OUR RECOMMENDATION	★	★★★
Description	For bearing mounting	For bearing mounting and dismounting
Easy dismounting	● Very low	● Very high
Easy mounting	● Very high	● Very high
Plummer block compatibility*	● Very high	● Very high

*Mounting with 222 series

● Very high performance ● Very low performance

Recommended kit: All-in-one

Ensure reliable and complete maintenance with our All-in-one kits. Each kit includes everything needed for a complete service, helping you reduce ordering errors, simplify inventory, and save costs and time by managing just one reference.

Partial maintenance	Complete maintenance	
Without replacing the plummer block	With sealed spherical roller bearing	With standard open spherical roller bearing
		



Recommended lubrication: Drive Booster

Lubrication made easy

Use our Drive Booster single-point lubrication system "Heavy Duty +", specifically developed for high-load applications. Powerful and autonomous device, no need for any external power supply.

- Available in 60, 120, 250 and 500 cm³
- Powerful (7.5 bar)
- Operating temperature: -20°C to +60°C
- Heavy-duty formula, eco-friendly (no heavy metals)



Recommended for lower loaded equipment: AGR sealing

AGR bearing seals are engineered and proven for extreme contamination, boosting reliability and performance in harsh environments.

All-purpose bearing

BENEFITS

- Protection against splashes in very tough environments
- Sealing suitable for high-pressure cleaning
- Lifelong lubricated insert — no need to re-grease



AGR sealing system

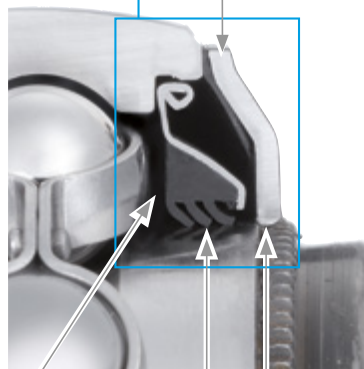


GREASED FOR LIFE

For lifelong lubrication:

High-performance grease with filling rate of 90%

- Good protection against wear
- Suitable for heavy loads



Zinc-plated shield:

Equipped with a single lip seal to seal the contact with the outer ring (zinc-plated)

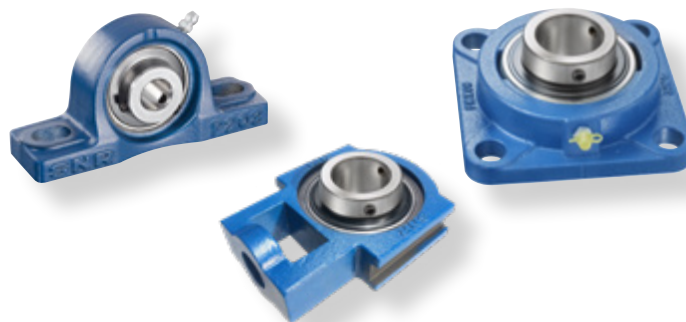


Crimped shield:

On inner ring (zinc-plated)

Triple lip seal L3:
Excellent protection against pollution

Due to their reinforced design, AGR inserts are compatible with selected SNR housings — such as P, PE, F, FE, FL and FLE series. Our cast iron self-aligning bearings offer a reliable and cost-effective solution. With many combinations available, they are easy to install and require no special skills — just a housing and bearing insert.



Solutions for grinders, crushers and screeners

These applications involve intense vibration and shocks.

Recommended bearing: EF800

The EF800 series is equipped with a solid brass cage and is particularly recognised for use in heavy-duty and vibrating applications.

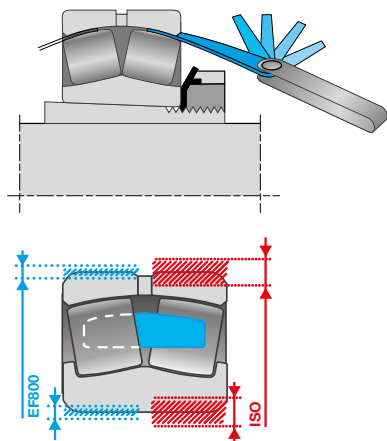
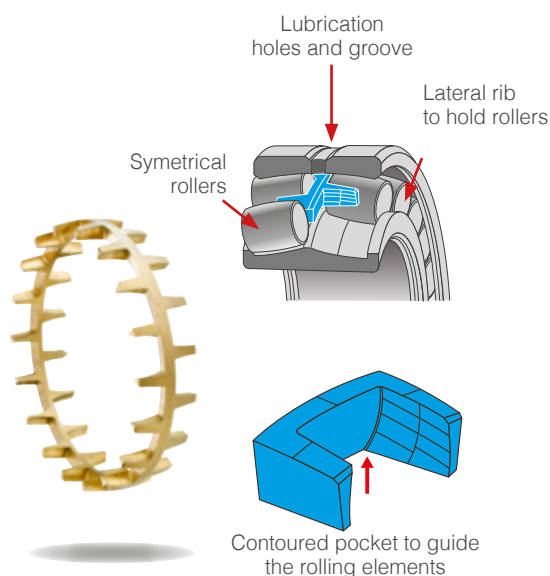
- **Brass cage advantages versus steel cage:**

- Brass material absorbs impact better than steel
- Self-lubricating property
- Warning effect: in case of a worn bearing, brass material will bend and be noisy

- **Excellent roller stability:** optimal roller guidance

- **Design without guiding ring/central rib:** higher volume available and better lubricant flow inside bearing as well as reduced friction due to less components

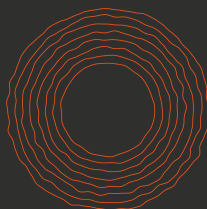
- **Reduced C4 internal clearance and bearing tolerances:** for better shock and vibration handling



Recommended lubrication: Heavy Duty / VIB

For high loads and harsh conditions

- **Heavy Duty / Heavy Duty +:** for grinders and crushers
 - No premature ageing of the grease up to 130°C in continuous use
 - Excellent performance under heavy applications
 - Very good resistance to washing out, which limits grease loss
 - Excellent protection against wear
- **VIB / VIB 400:** high-performance greases for grinders, crushers and screeners (in vibration-intensive, humid, and dusty environments)
 - Equipment service life maintained even in the event of impacts or vibrations
 - Very good resistance to washing out and low evaporation properties, which limits grease loss
 - Longer service life for the equipment by protecting it from corrosion



NTN

Make the world **NAMERAKA**



DOC_L_MOC_ARG1_LGBA - CODE SAP : 740358 - Document non contractuel - NTN Europe - copyright international - 12/2025 - Photos : NTN Europe - Pedro Studio Photos

This document is the exclusive property of NTN Europe. Any total or partial reproduction hereof without the prior consent of NTN Europe is strictly prohibited. Legal action may be brought against anyone breaching the terms of this paragraph. NTN Europe shall not be held liable for any errors or omissions that may have crept into this document despite the care taken in drafting it. Due to our policy of continuous research and development, we reserve the right to make changes without notice to all or part of the products and specifications mentioned in this document.
© NTN Europe, international copyright 2026.

NTN Europe - 1 rue des Usines - 74000 Annecy
RCS ANNECY B 325 821 072 - Code APE 2815Z - Code NACE 28.15
www.ntn-europe.com



Brands of
NTN Group