

# CNZ CONNECT

WHERE PRECISION MEETS GROWTH

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## The Role of Seals and Shields in Bearing Performance



**Small parts. Big protection. Your bearings deserve the right cover.**

Bearings don't just fight friction – they battle contaminants too. Seals and shields play a crucial role in this defence, keeping dirt, water, and debris out, while locking lubrication in. The right protection can double a bearing's life – the wrong one can cut it short.

### Seals vs. Shields: What's the Key Difference?

FEATURE		SEALS(RS/2RS)	SHIELDS(Z/ZZ)	OPEN BEARINGS
Protection Level		High	Moderate	None
Lubricant Retention		Excellent	Good	Poor
Maintenance Need		Very Low	Moderate	High

**40%**

### Increase in Bearing Lifespan

A real-world switch to sealed bearings in high-dust, high-moisture cement plants delivered massive savings.

### Case Study: Vertical Mixer Success

An engineer in Pune solved chronic mixer shaft failures not with better maintenance, but by selecting a better fit: switching to angular contact bearings (better suited for complex loads) reduced breakdowns by over **60%**.



# Technical Deep Dive: The Right Bearing for the Job

The right bearing isn't just one that fits—it's one that matches the application's load, speed, temperature, and alignment demands. A mismatch leads to failure and cost.



## Deep Groove Ball Bearings

Best For: High-speed, moderate Radial Load. (Motors, Pumps)



## Angular Contact Ball Bearings

Best For: (Combined) Radial + Axial Load. (Gearboxes, Compressors)



## Spherical Roller Bearings

Best For: Misalignment + Heavy Load. (Mining, Paper Mills)



## Tapered Roller Bearings

Best For: High Radial + axial Load (one way). (Truck Wheels, Conveyors)

## 5 Key Questions to Ask:



**Right Bearing. Right Fit. Reliable Performance.**



**Schedule a Selection Review**

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Don't rely on guesswork. Consult your technical data or an expert when in doubt.



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## Solar Roads – The Future of Highways

Smart surfaces, smart movement – the road itself is becoming a power source. Countries like France, China, and the Netherlands are testing solar-powered highways that can generate electricity as vehicles drive across them. Some prototypes can even charge electric cars on the go, turning roads into self-sustaining energy networks.

It's innovation that keeps the world moving – literally.  
Smooth roads. Smooth motion. CNZ Bearings.



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