

EXPLORER

Spherical Roller Bearings



*The new world standard
for endurance and performance
in spherical roller bearings*

Introducing Explorer spherical

A spherical roller bearing so superior,
it will change the way the world works.



cal roller bearings

Imagine a new spherical roller bearing so much better than any other that its endurance life is several times longer than that of its nearest rival – a bearing so durable that it will revolutionize maintenance schedules – a bearing so advanced, it will open up a world of new options for design engineers creating the next generation of industrial machinery.



SKF® engineers did. And the result is Explorer, a new generation of bearings that literally redefines the design limits of spherical roller bearings.

To find out how you can benefit from the superior endurance and

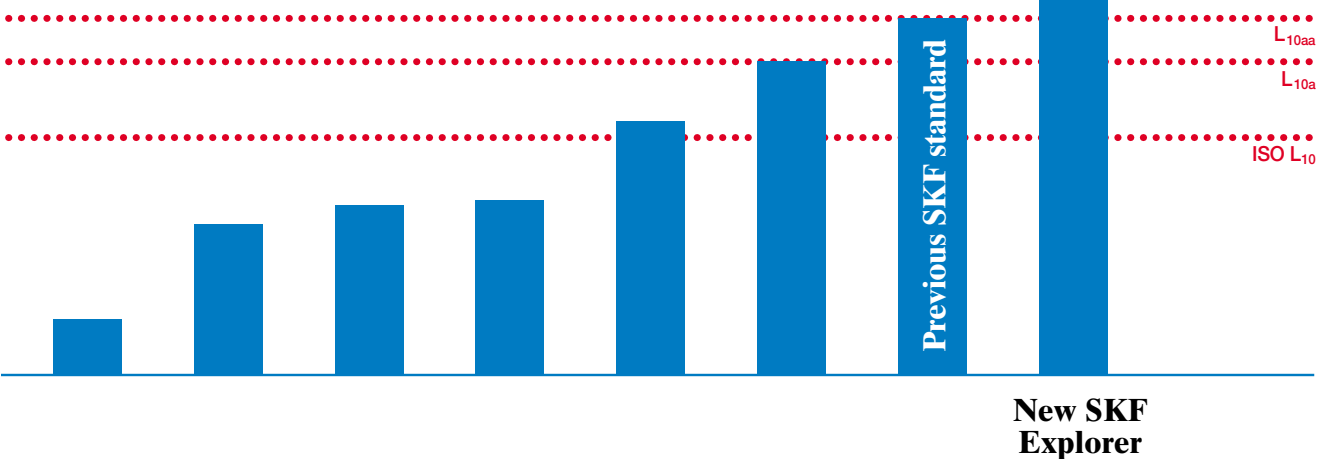
unmatched performance of Explorer spherical roller bearings, read on.

New SKF Explorer spherical roller bearings

Off the charts

Under both clean and contaminated conditions, Explorer bearings lasted up to 3x longer than any other manufacturer's product.

This chart illustrates endurance test results obtained under well defined conditions on the same size bearing from the different manufacturers of this type, beginning with low quality manufacturers on the left and moving to high quality manufacturers (SKF included) on the right.



For design engineers, new options

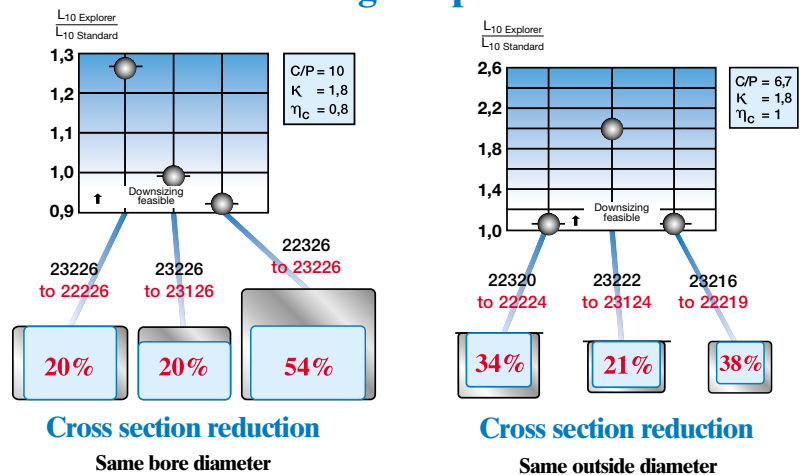
Over the years, manufacturing and materials research and process improvements have enabled machine components to get smaller without decreasing power output. With each developmental milestone, engineers were given a choice: Either downsize the application or increase power output.

The new generation of Explorer spherical roller bearings represents the next significant improvement in performance. But this is not just a short hop to the next level. This is a quantum leap in bearing performance. Tests have shown that these spherical roller bearings *can last up to three times longer than the bearing you're currently using.*

OE options

These graphs illustrate various design options made possible by Explorer bearings' superior load capacity. As seen, significant cross section reductions can be achieved when retaining either the bore diameter (left) or the outer diameter (right).

Advantage Explorer



Downsizing with no downside

Because Explorer bearings have a higher load rating than conventional bearings of similar size, engineers may use a smaller Explorer bearing to do the same job. This opens the door to new designs that are lighter and more energy-efficient. For example, changing from a conventional 22216 E to an Explorer spherical roller bearing 22214 E will give a mass reduction of 25 %! It will also under certain conditions give a more than 50 % longer life.

s for powering up or sizing down

The longer bearing service life of Explorer spherical roller bearings opens up a new world of possibilities. If you size-down with an Explorer bearing, not only will you be able to reduce noise, vibration and warranty costs, but you'll also be able to build value into each component by increasing speed, improving service intervals, reducing heat and

power consumption and controlling your customer's maintenance costs.

Power-up or size-down – the option you choose will depend on whether you're developing a new design or making improvements within existing parameters.

Increase service life of existing designs

Don't need to increase power output?
Use an Explorer bearing of equal size to:

- Increase safety factor
- Increase service intervals
- Increase machine uptime

Maintain power output of new designs

Use a smaller Explorer bearing to:

- Reduce overall dimensions to save on material costs and weight
- Achieve a stiffer design
 - Reduce heat generation
 - Increase speeds

Increase power output of existing designs

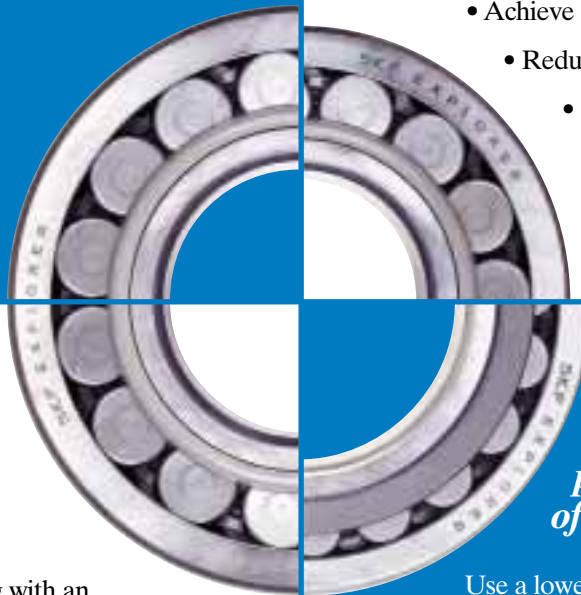
Replace the existing bearing with an Explorer bearing of equal size maintaining the same service life and machine uptime to:

- Increase power density (output)
- Avoid costly redesign

Increase power density of new designs

Use a lower profile Explorer bearing with the same outside diameter to:

- Increase shaft size
- Achieve a stiffer design



For maintenance engineers, a new le

It's unrealistic to think that one day every piece of rotating equipment in manufacturing and processing facilities will come equipped with SKF Explorer bearings. But you will be pleased to know that you can replace existing bearings with Explorer bearings, because they are *dimensionally interchangeable* with ISO designs.

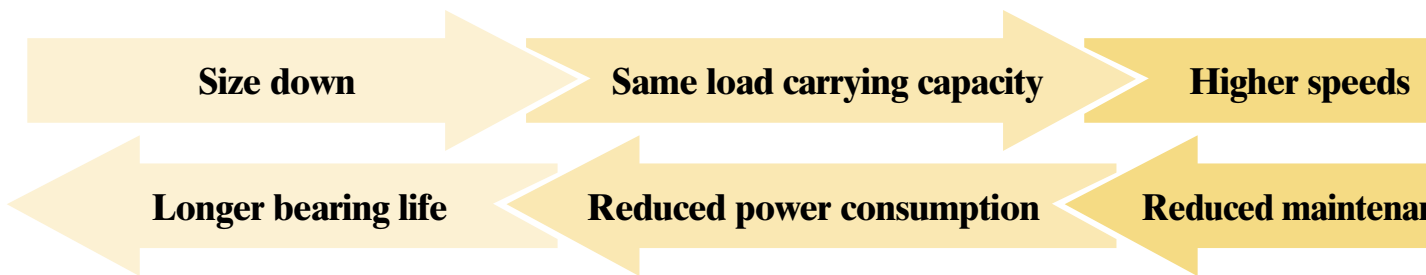
Advantages of Explorer bearings over conventional designs

If you're replacing a conventional bearing with an Explorer bearing, the Explorer bearing will run

quieter and longer – much longer than the bearing you just replaced.

If you buy new machinery that has been sized-down with an Explorer bearing, you'll see the benefits immediately. Your new machine will run quieter and cooler with less vibration. It will consume less power, require less maintenance, and run longer.

So the next time you're replacing a bearing or specifying the bearings for a new piece of equipment, ask for SKF Explorer bearings.



Typical applications for Explorer bearings



Gearboxes

Existing gearbox designs can be upgraded with Explorer bearings for 15 to 25 % higher power rating.



Pinion gears

Explorer bearings allow the size of the bearing on the input shaft to be decreased. Because the new bearing runs cooler, reliability is enhanced.



Fans

When traditional bearings are replaced with Explorer bearings, fan applications run quieter and achieve longer service life.



Pumps

Replacing traditional bearings in water and hydraulic pumps with Explorer bearings reduces maintenance costs and extends service intervals.



Mining & construction equipment

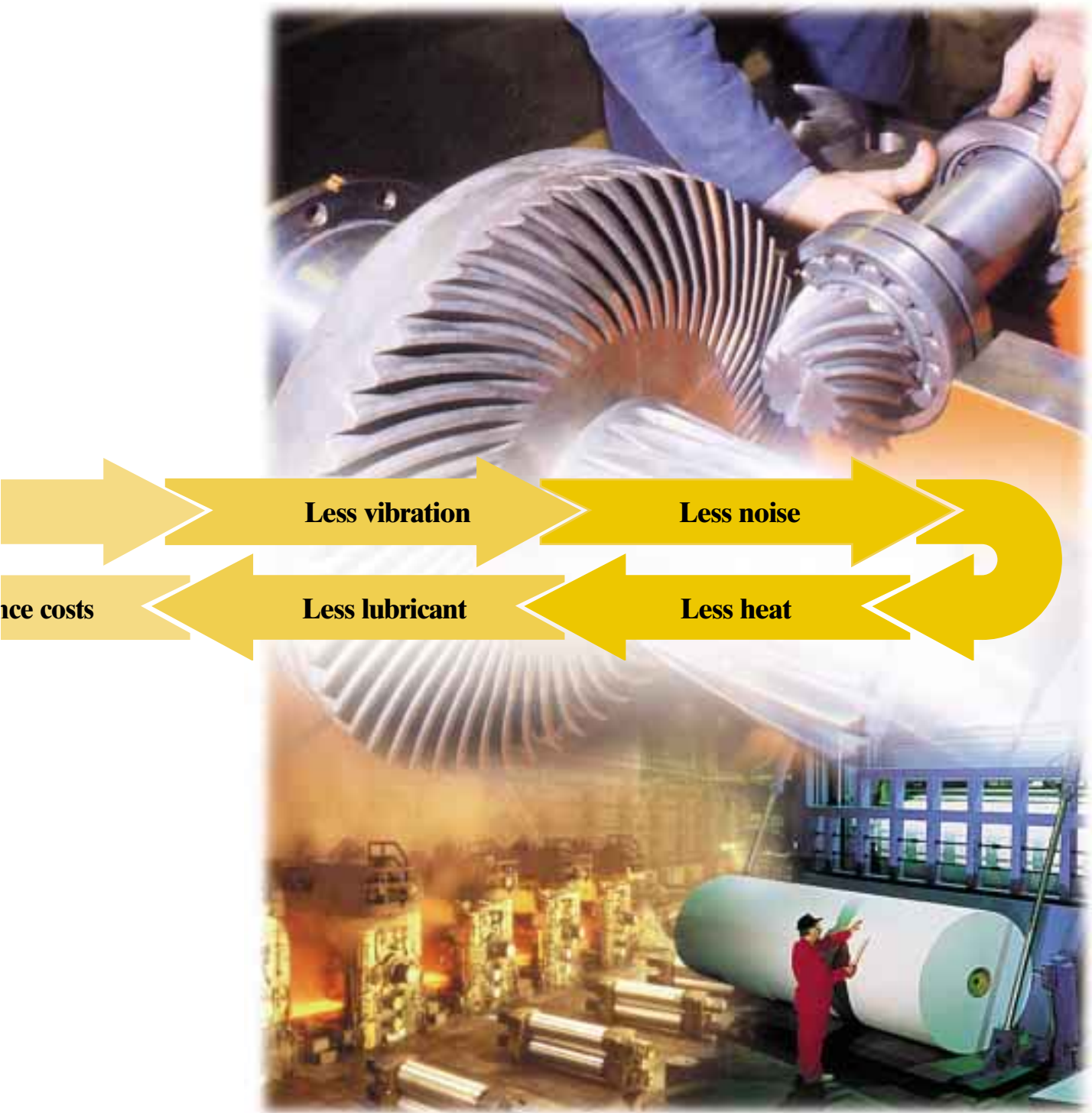
Advanced bearing design and superior sealing technology make Explorer bearings ideal for tough environments where bearings are subjected to heavy loads and contaminants.



Paper making equipment

From the wood yard through pulp treatment to paper making equipment, replacing existing bearings with Explorer bearings will increase uptime and reduce maintenance costs significantly.

Level of performance and endurance



Explorer spherical roller bearings are dimensionally interchangeable with other sphericals since they conform to the ISO Dimension Plan. Ideal applications include: pulp and paper, mining, construction, printing, steel manufacturing, petrochemical processing, food, textiles and wastewater. The designation (part number) has not been changed so ordering is easy. Some CC and E designs are available in sealed and unsealed versions.



SKF Explorer
Spherical Roller
Bearings

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