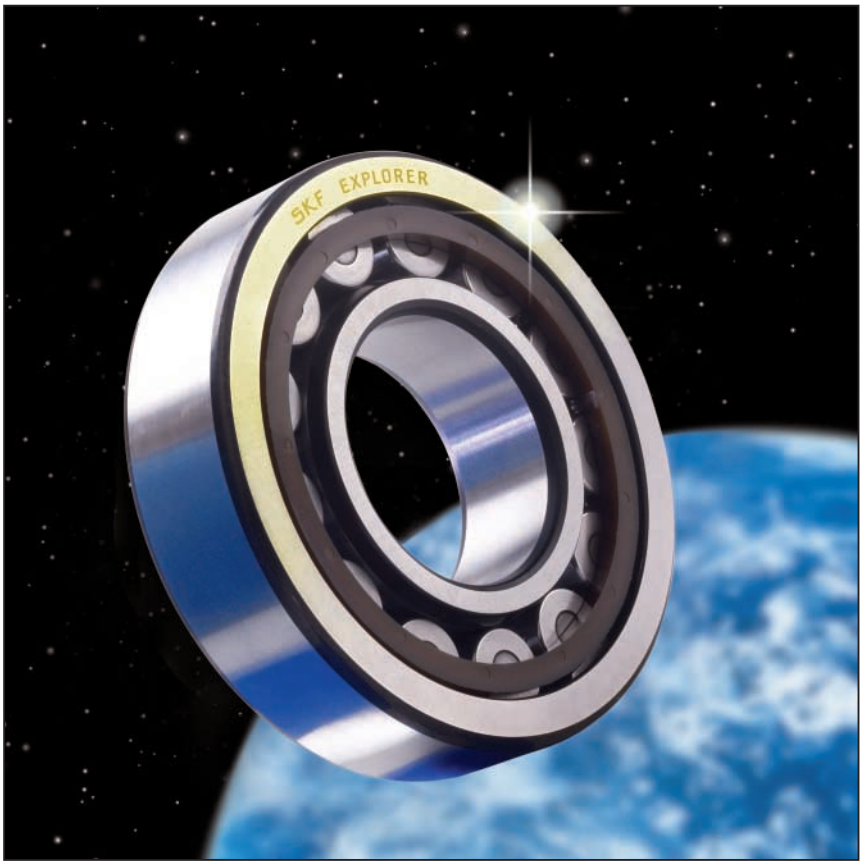
SKF

EXPLORER

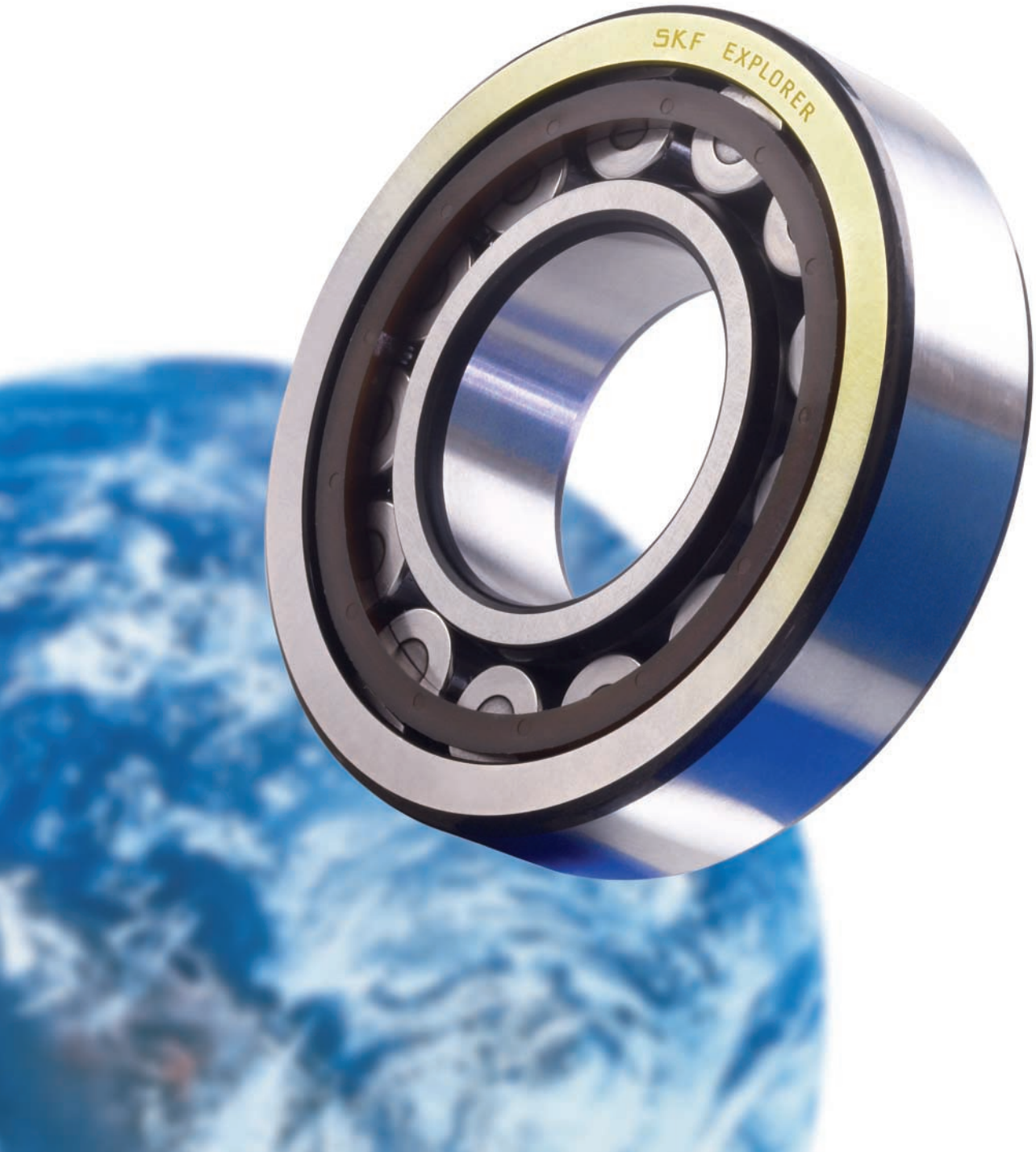
Cylindrical Roller Bearings



The new world standard
for endurance and performance
in cylindrical roller bearings

Introducing Explorer cyl

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



indrical roller bearings

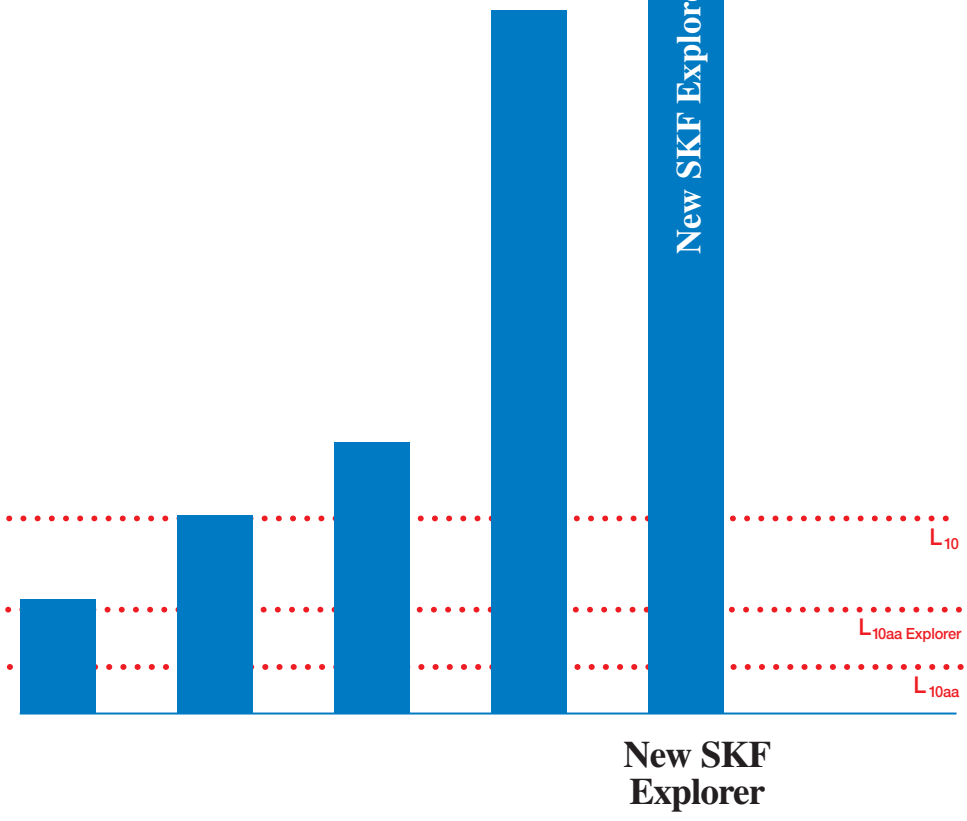
Imagine a new cylindrical roller bearing so much better than any other that its endurance life is several times longer than that of its nearest rival – a bearing so durable that it will revolutionize maintenance schedules – a bearing so advanced, it will open up a world of new options for design engineers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

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

To find out how you can benefit from the superior endurance and unmatched performance of Explorer cylindrical roller bearings, read on.

Off the charts

Under thin film lubrication conditions, endurance tests prove SKF Explorer cylindrical roller bearings lasted significantly longer than any other manufacturers' product.



For design engineers, new options

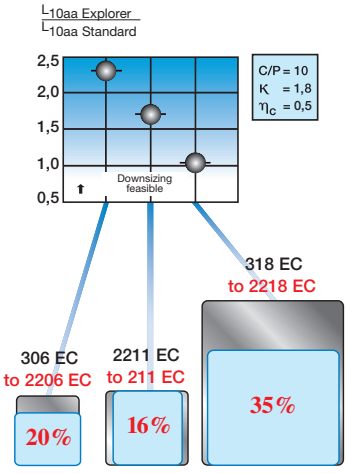
Over the years, manufacturing and materials research and process improvements have enabled machine components to get smaller without decreasing power output. With each developmental milestone, engineers were given a choice: Either downsize the application or increase power output.

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

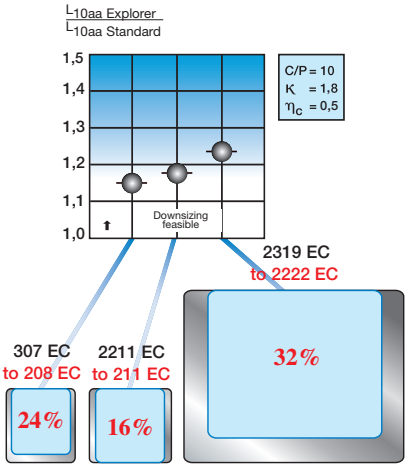
Advantage Explorer

OE options

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



Cross section reduction
Same bore diameter



Cross section reduction
Same outside diameter

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 318 EC to a 2218 EC Explorer bearing will give a mass reduction of 40 %!

s for powering up or sizing down

The longer bearing service life of Explorer cylindrical 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

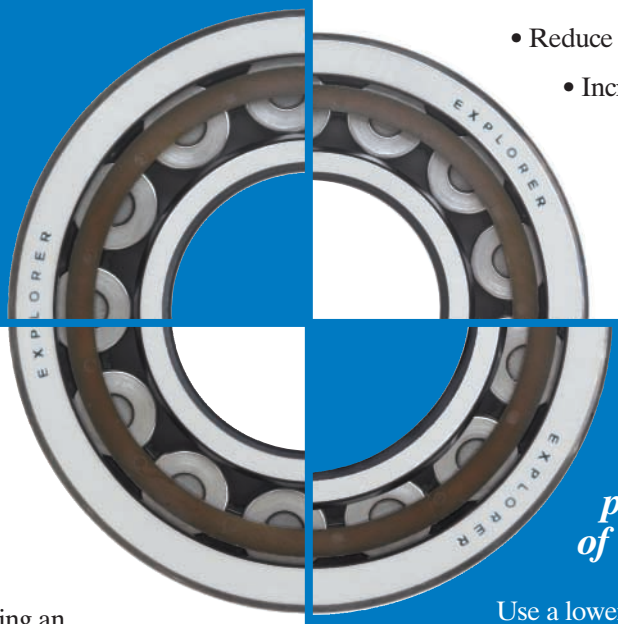
Don't need to increase power output?
Use an Explorer bearing of equal size to:

- Increase safety factor
- Reduce vibration
- Reduce heat generation
- 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
- Reduce heat generation
- Increase speeds



Increase power output of existing designs

Avoid costly redesign by using an Explorer bearing of equal size to:

- Increase power density (output)
- Increase speeds
- Increase loads

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
- Operate at the same or higher speeds

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.

Size down → **Same load carrying capacity** → **Higher speeds**

Longer bearing life ← **Reduced power consumption** ← **Reduced**

Typical applications for Explorer bearings

Compressors

Replacing traditional cylindrical roller bearings with Explorer bearings will further support the demand for accuracy while increasing efficiency and power density in a compressor.

Pumps

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

Railway drives

Replacing traditional cylindrical roller bearings with Explorer quality bearings reduces maintenance costs and extends service intervals.

Wind mills

New Explorer cylindrical roller bearings generate fewer vibrations and less noise, while increasing bearing service life and improving service intervals.

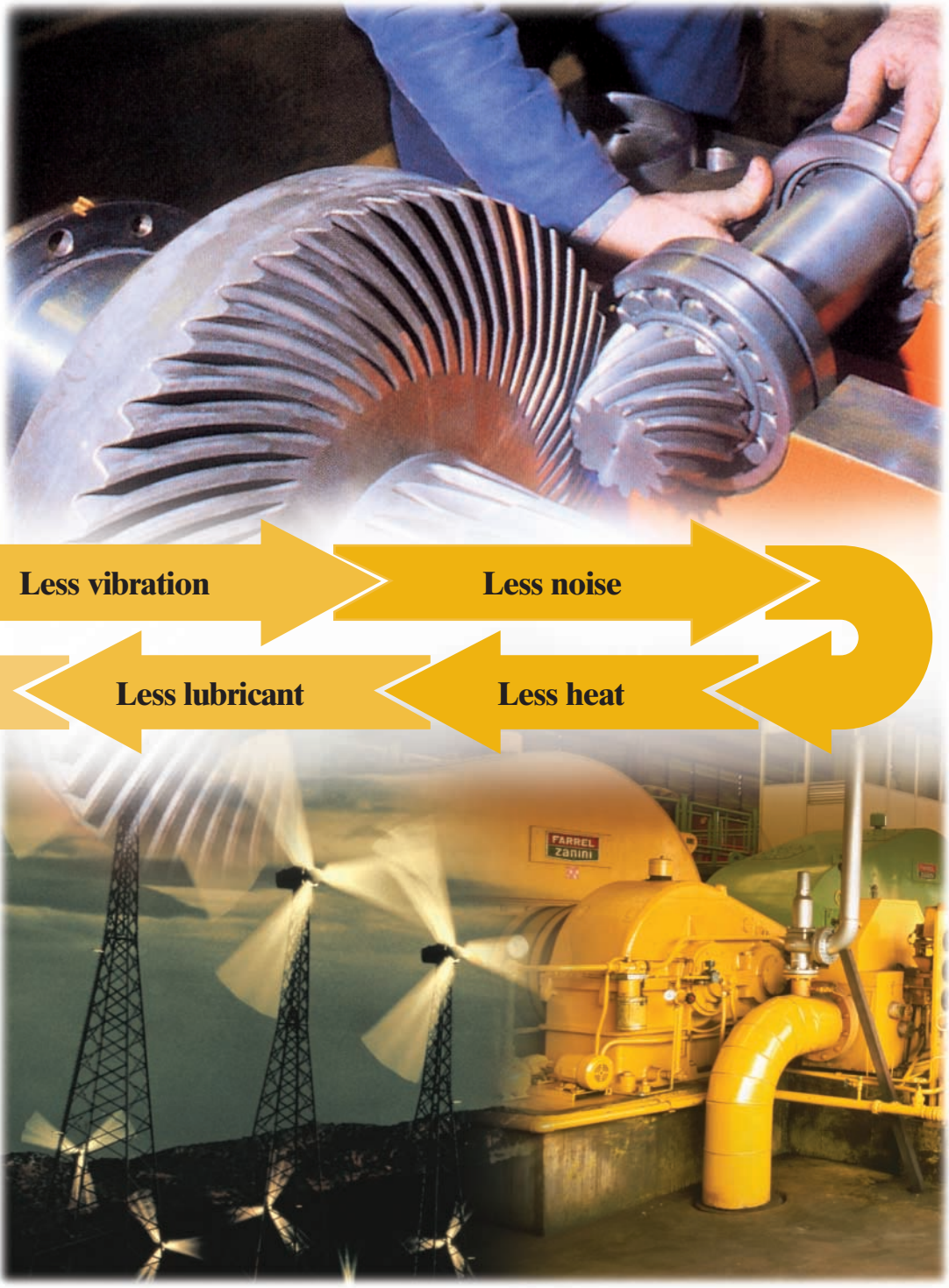
Industrial gearboxes

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

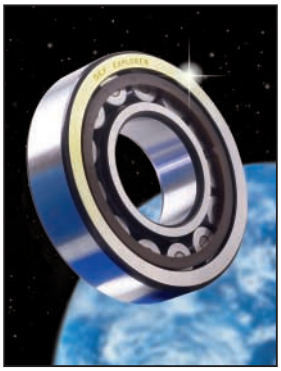
Unbalanced exciters

New Explorer cylindrical roller bearings allow unbalanced exciters to run at higher speeds and/or with higher unbalanced loads.

vel of performance and endurance



Explorer cylindrical roller bearings are dimensionally interchangeable with other cylindrical roller bearings since they conform to the ISO Dimension Plan. The designation (part number) has not been changed so ordering is easy.



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