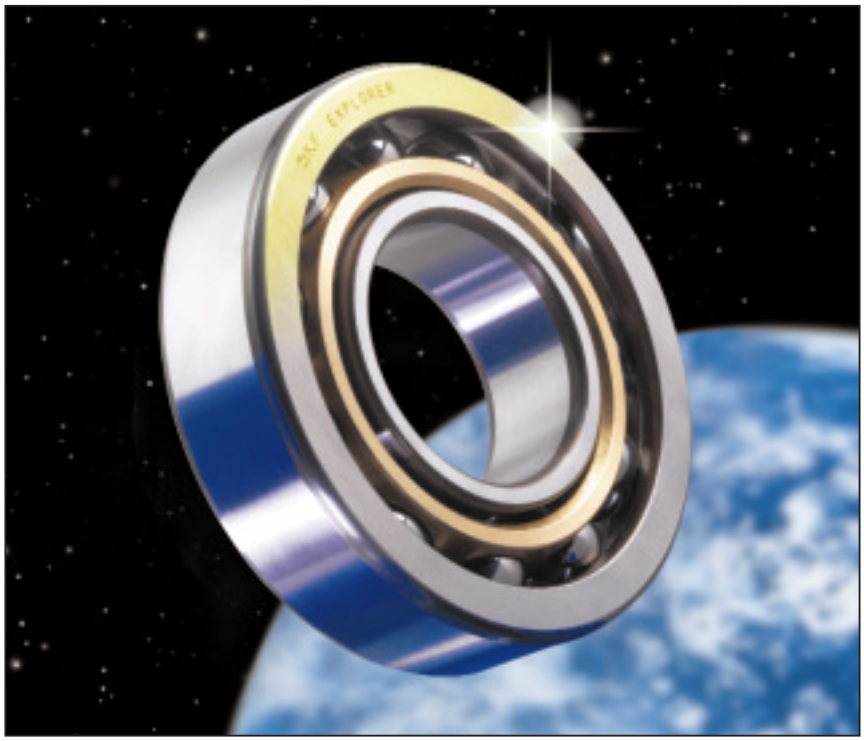
EXPLORER SERIES

Angular Contact Ball Bearings



The new world standard
for endurance and performance
in angular contact ball bearings

Introducing Explorer Series Angular Contact Ball Bearings

An angular contact ball bearing so superior, it will change the way the world works.

Imagine a new angular contact ball 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.

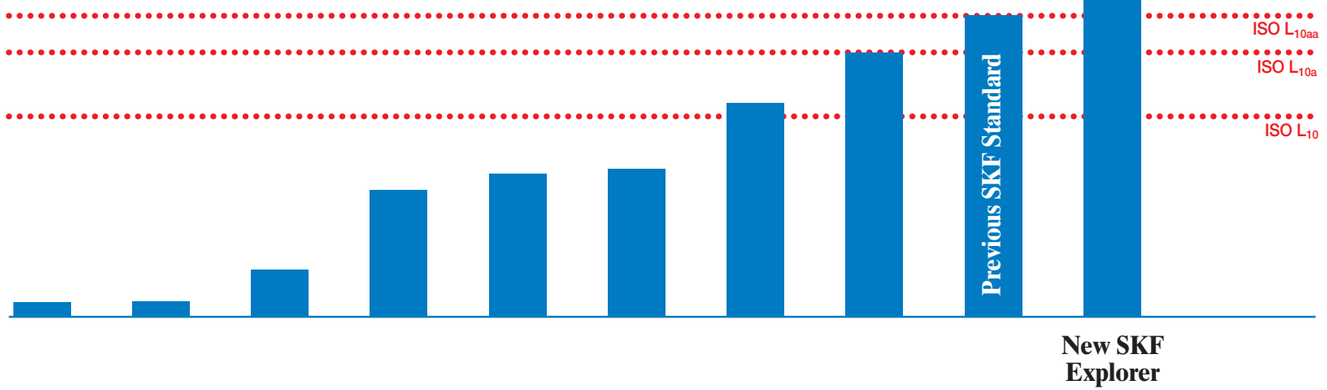
SKF® engineers did. And the result is the Explorer Series, a new generation of bearings that literally redefines the design limits of angular contact ball bearings.

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

There's no comparison.

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 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 for powering up or sizing down.

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 angular contact ball 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 angular contact ball bearings ***can last up to three times longer than the bearing you're currently using.***

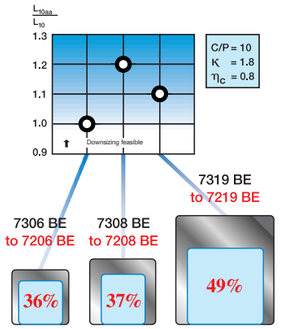
The longer bearing service life of Explorer angular contact ball bearings opens up a new world of possibilities. If you size-down with an Explorer bearing, not only will you be able to reduce noise, vibration and warranty costs, but you'll also be able to build value into each component by increasing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

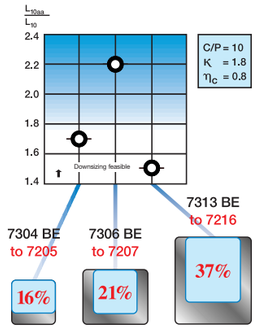
Advantage Explorer

OE Options

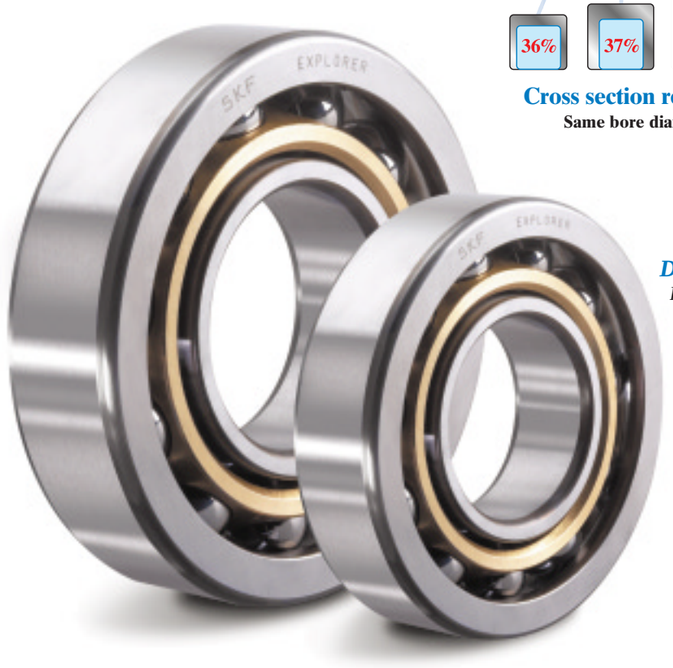
These graphs illustrate various design options made possible by Explorer bearings' superior capabilities. As seen, cross section reductions can be achieved when retaining either the bore diameter (left) or the outer diameter (right).



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 7308 BE to a 7208 BE Explorer bearing will give a mass reduction of 42%!

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 level of performance and endurance.

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.

Explorer → **Increase Safety Factor** → **Higher Loads** → **Less Vibration** → **Less Noise**

Longer Bearing Service Life ← **Reduced Power Consumption** ← **Reduced Maintenance Costs** ← **Less Lubricant** ← **Less Heat**

Typical applications for Explorer bearings

Compressors
Replacing traditional bearings with Explorer Series bearings will further support the demand for accuracy and increased power output in a compressor.

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

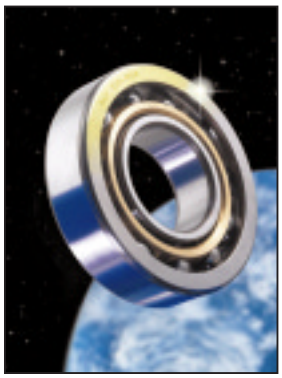
Fans
When traditional bearings are replaced with Explorer bearings, fan applications run quieter and achieve longer service life.

Wind Mills
New Explorer Series bearings can be used to upgrade power output or size-down the design of gearboxes in wind mill applications.

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

Turbines
Increase the safety factor in turbine applications with Explorer Series bearings from SKF.

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



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