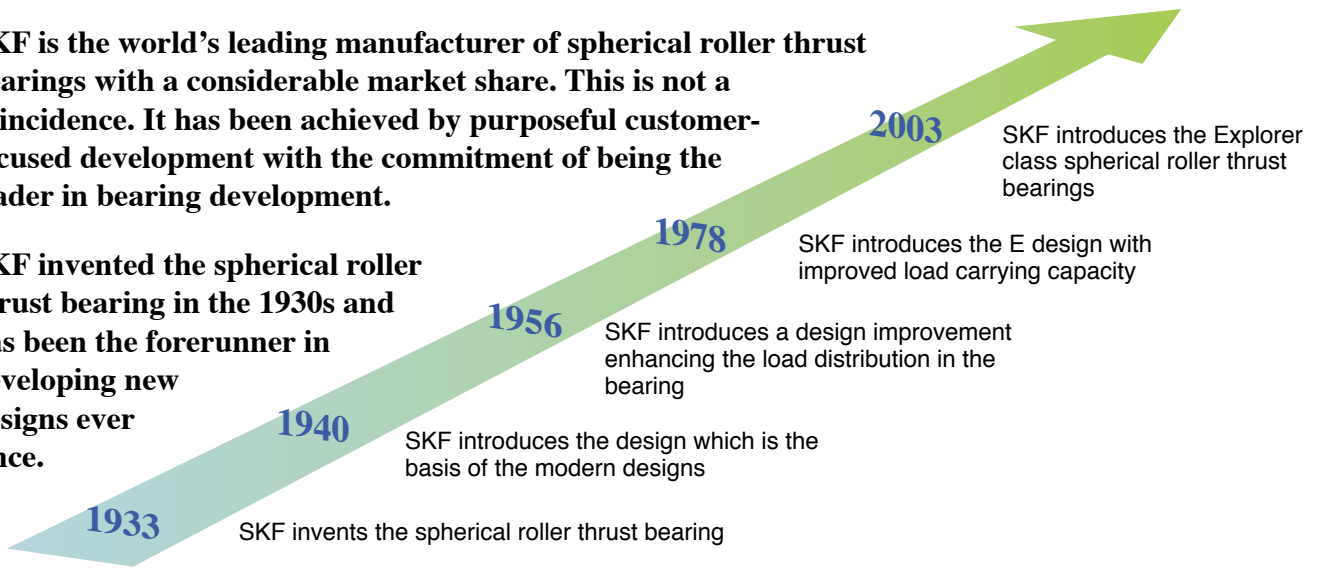


# Why SKF spherical roller thrust bearings

SKF is the world's leading manufacturer of spherical roller thrust bearings with a considerable market share. This is not a coincidence. It has been achieved by purposeful customer-focused development with the commitment of being the leader in bearing development.

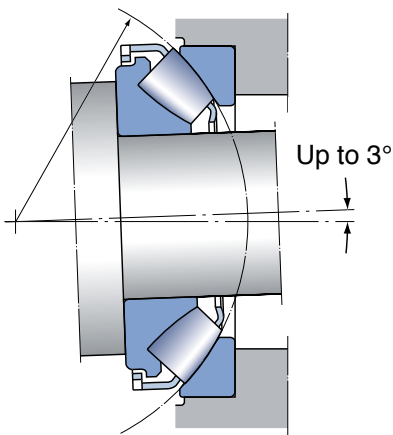
SKF invented the spherical roller thrust bearing in the 1930s and has been the forerunner in developing new designs ever since.



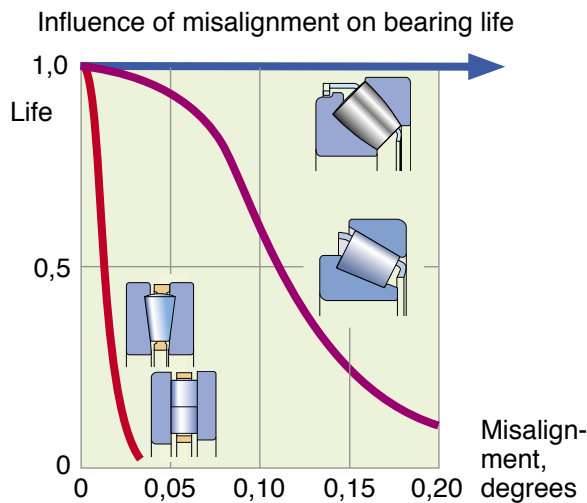
## SKF Spherical roller thrust bearings make the difference

### Self-aligning

#### Spherical roller thrust bearings



#### Other bearing types

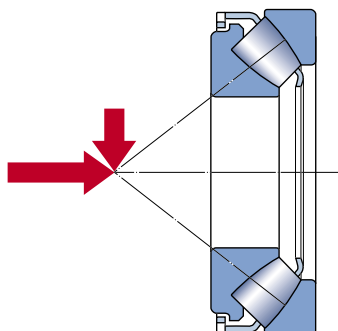


#### Your SKF advantages

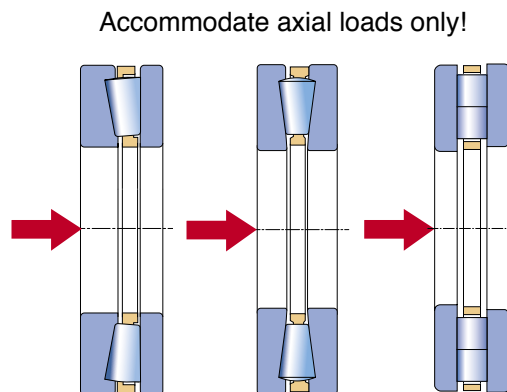
- Accommodate shaft misalignment
- Insensitive to form errors
- More cost-efficient machine designs
- Lower operating temperature
- Longer bearing service life
- High reliability

### Accommodate combined loads

#### Spherical roller thrust bearings



#### Other bearing types



#### Your SKF advantages

- Compact bearing arrangement
  - No need for extra radially supporting bearing
  - Less arrangement weight
  - Less arrangement cost

## Highest carrying capacity

SKF

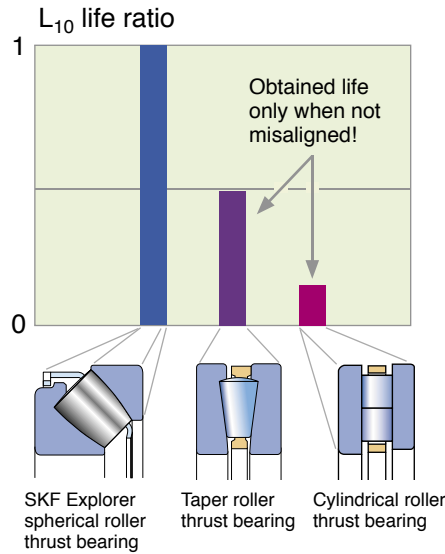
Competing bearing types

Your SKF advantages



SKF spherical roller thrust bearings are stronger than any other type of thrust roller bearing with the same diameter section thanks to:

- Optimised internal design
- Produced to the stringent SKF Explorer quality specifications



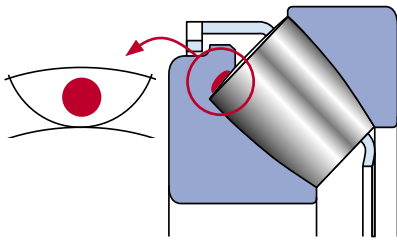
- Longer bearing service life
- More compact bearing arrangement
- Less manufacturing cost
- Higher safety factor

## Lowest internal friction

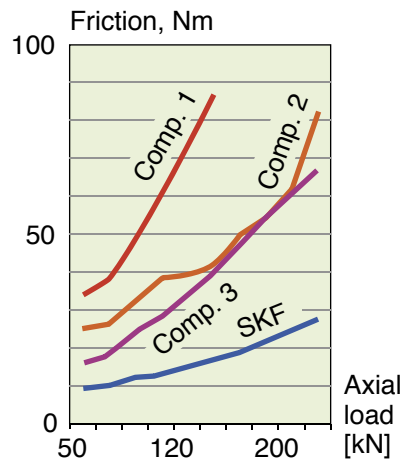
SKF

Competitor spherical roller thrust bearings

Your SKF advantages



- The optimum contact between rollers and flange gives very low internal friction permitting the bearings to operate from very low to very high speeds. Speeds up to three times the reference speed are possible under certain operating conditions.



- Reduced energy consumption
- Minimized maintenance cost
- Higher reliability
- Higher machine output
- Very high speed capability

## Superior bearing material

SKF

Competitor spherical roller thrust bearings

Your SKF advantages

### SKF XBITE steel

*Engineered for heavy-duty operation*

- Very high toughness giving very high wear and fracture resistance – can be mounted with very tight fit on shafts.
- High dimensional stability up to 200 °C as standard (S1)

Standard Martensitic bearing steel

- Less toughness
- Less wear resistance

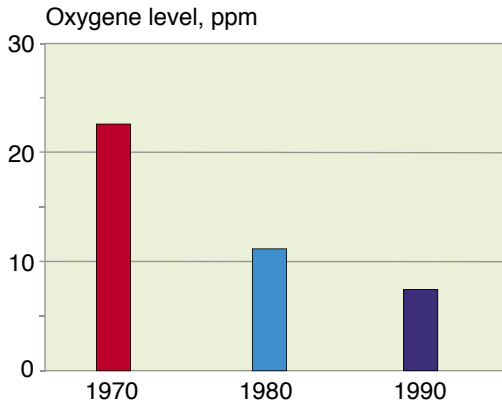
- More reliable operation
- Safer failure mode (early warning before failure)
- Longer bearing service life

# SKF Explorer



The new performance class for spherical roller thrust bearings, spherical roller bearings and CARB® toroidal roller bearings.

## Material quality



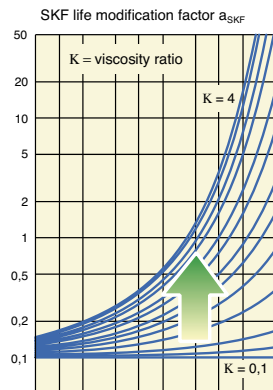
- Extremely clean and homogenous steel
- Reduced oxygen level content
- Improved steel quality

## Advantage

- Increased bearing service life

## Raceway quality

SKF life modification factor  $a_{SKF}$  for spherical roller thrust bearings

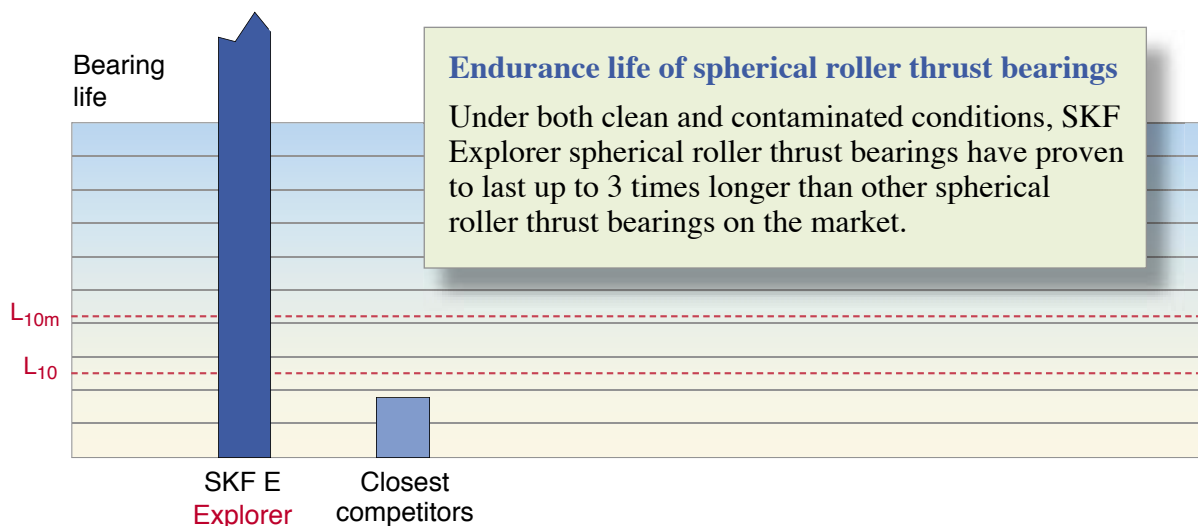


- Improved roller and raceway surfaces
- Improved lubricant film build-up

## Advantage

- Longer bearing service life
- Longer lubricant life
- Lower bearing operating temperature

## Bearing service life



# SKF Explorer – A quantum leap in bearing performance

## The power of SKF Explorer spherical roller thrust bearings

### Increase service life of existing machines

Replace the existing bearing using an SKF Explorer bearing of equal size to:

- Increase life
- Increase machine uptime
- Increase safety factor
- Reduce maintenance costs

### Maintain power output of new machines

Use a smaller bearing of SKF Explorer quality to:

- Reduce overall machine dimensions to save on material cost and weight
- Achieve smoother, quieter operation
- Reduce friction, energy consumption and lubricant usage

### Increase power output of existing machines

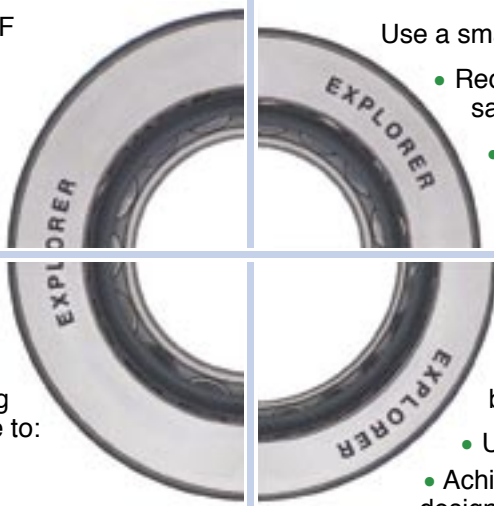
Replace the existing bearing with an SKF Explorer bearing of equal size maintaining the same service life and machine uptime to:

- Increase power density
- Increase loads
- Avoid costly redesign

### Increase power density of new machines

Use a lower cross section SKF Explorer bearing with the same outside diameter to:

- Use a stronger or even hollow shaft
- Achieve a stiffer and more cost effective design
- Increase system life due to higher stiffness



## SKF spherical roller thrust bearing range

- SKF has the widest range of standard spherical roller thrust bearings.
- The SKF Explorer bearings are easily identified by the "Explorer" marking on both bearing and box. The designations, however, remain the same as before.

For more information please contact your local SKF representative

