

# SKF Explorer cylindrical roller bearings

Extended range for large, heavy industrial applications





# A higher level of performance for large, heavy-duty applications

The SKF Explorer performance class now includes cylindrical roller bearings specifically designed for large, demanding applications. These 22 and 23 dimension series bearings, which go up to 420 mm outside diameter, are excellent for the most demanding applications, including:

- wind turbine gearboxes
- large slurry pumps
- large industrial gearboxes
- mining equipment

## Run cooler, smoother, faster, longer

In heavy industrial applications that typically use standard bearings, SKF Explorer bearings deliver performance that far exceeds expectations. In fact, while running cooler and smoother, SKF Explorer cylindrical roller bearings provide a 15% higher load carrying capacity, which results in longer life, when compared to standard cylindrical roller bearings.

In addition, the optimized internal geometry, combined with SKF's unique manufacturing and finishing processes, have substantially reduced friction and heat generated by the bearing, enabling SKF Explorer cylindrical roller bearings to accommodate higher speeds than standard bearings.

## Start. Stop. Keep going.

In applications where there are frequent starts and stops, conventional bearings can suffer from problems related to the slow formation of a lubricant film. SKF Explorer bearings solve that challenge with a surface finish that promotes the formation of a lubricant film.

## The SKF Explorer advantage

For demanding applications, medium size SKF Explorer cylindrical roller bearings are superior by every measure when compared to standard bearings. Benefits include:

- longer service life
- reduced friction
- extended maintenance intervals
- higher load carrying capacity
- improved wear-resistance
- decreased energy consumption
- lower cost of ownership
- increased productivity

### A higher level of performance

When compared to non-SKF Explorer cylindrical roller bearings, SKF Explorer cylindrical roller bearings undergo a number of enhancements. These enhancements are designed to improve reliability and increase the service life of the bearing even in the most demanding applications.

### Special heat treatment

While a unique heat treatment process is applied to all SKF Explorer bearings, those bearings with a PEX designation suffix undergo a specialized heat treatment of both the inner and outer rings to further improve the microstructure of the steel and make the bearings more durable and resistant to shock loads.

### Improved surface topography

Improvements in the surface finish of medium size SKF Explorer cylindrical roller bearings further reduce friction. While standard medium size rollers are finished by grinding, SKF Explorer rollers undergo a finishing process that further enhances the surface topography. Benefits include reduced heat generated by the bearing, improved wear-resistance and longer service life.

### Reduced flange friction

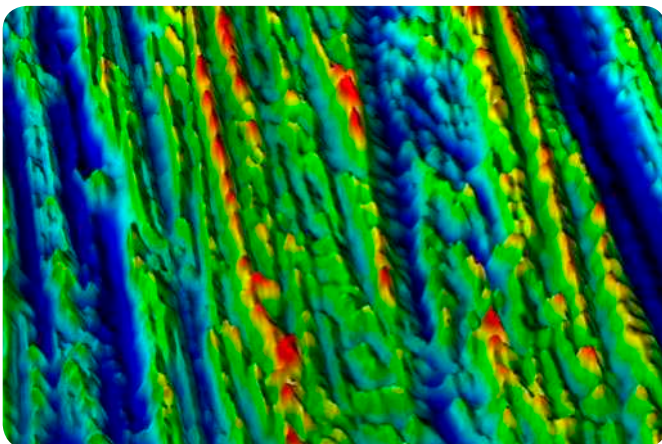
Medium size SKF Explorer NJ series cylindrical roller bearings, with a PEX designation suffix, can accommodate heavier axial loads than non-SKF Explorer bearings. The improved surface structure and contact properties provide the following benefits:

- higher axial load carrying capacity
- reduced frictional moment
- reduced risk of roller-flange smearing

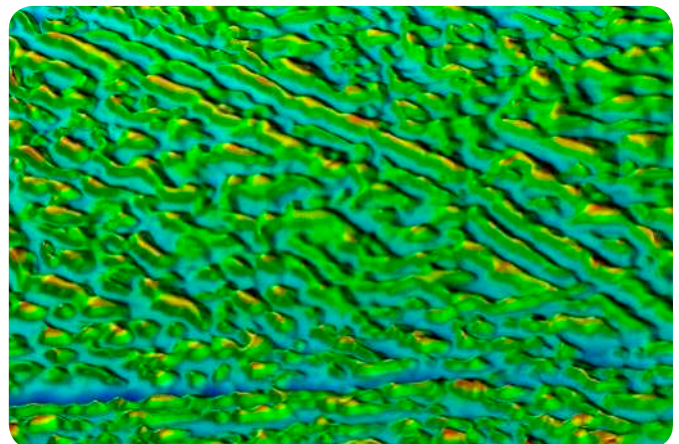
## A sustainable product

SKF Explorer medium size bearings were designed to support SKF's Beyond Zero sustainability efforts. Through this initiative, SKF is committed to creating products that consume less energy when in use than the energy needed to manufacture them.

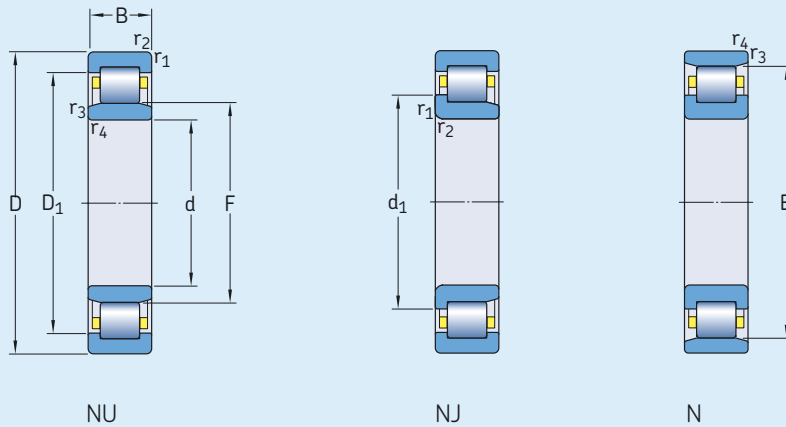
*The surface topography of the rollers in a standard cylindrical roller bearing*



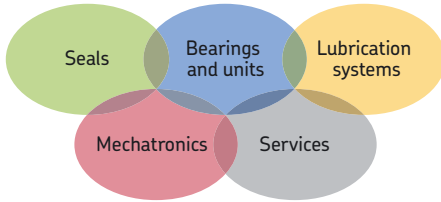
*The optimized surface topography of the rollers in an SKF Explorer cylindrical roller bearing with a PEX designation suffix*



Dimensions and product specifications for medium size SKF Explorer cylindrical roller bearings with a PEX designation suffix.



Dimensions								Basic load ratings		Fatigue load limit	Speed ratings		Mass	Designation
d	d <sub>1</sub>	D	D <sub>1</sub>	B	E	F	r <sub>min</sub>	C	C <sub>0</sub>	P <sub>u</sub>	Reference speed	Limiting speed	kg	–
mm								kN		kN	r/min		kg	–
<b>160</b>	222	340	–	114	300	204	4	1 430	1 730	173	2 000	3 200	53	<b>N 2332 ECMB/PEX</b>
<b>160</b>	222	340	286	144	300	204	4	1 430	1 730	173	2 000	3 200	54	<b>NJ 2332 ECMA/PEX</b>
<b>160</b>	–	340	286	144	300	204	4	1 430	1 730	173	2 000	3 200	53,5	<b>NU 2332 ECMA/PEX</b>
<b>170</b>	235	360	–	120	316	216	4	1 660	2 040	204	1 900	3 000	62	<b>N 2334 ECMB/PEX</b>
<b>170</b>	235	360	300	120	316	216	4	1 660	2 040	204	1 900	3 000	63	<b>NJ 2334 ECMA/PEX</b>
<b>170</b>	–	360	300	120	316	216	4	1 660	2 040	204	1 900	3 000	63	<b>NU 2334 ECMA/PEX</b>
<b>180</b>	248	380	–	126	339	227	4	1 860	2 240	216	1 800	2 800	71	<b>N 2336 ECMB/PEX</b>
<b>180</b>	248	380	320	126	339	227	4	1 860	2 240	216	1 800	2 800	72	<b>NJ 2336 ECMA/PEX</b>
<b>180</b>	–	380	320	126	339	227	4	1 860	2 240	216	1 800	2 800	72	<b>NU 2336 ECMA/PEX</b>
<b>190</b>	262	400	–	132	360	240	5	2 120	2 550	236	1 700	2 600	82	<b>N 2338 ECMB/PEX</b>
<b>190</b>	262	400	343	132	360	240	5	2 120	2 550	236	1 700	3 000	83	<b>NJ 2338 ECML/PEX</b>
<b>190</b>	–	400	343	132	360	240	5	2 120	2 550	236	1 700	3 000	82,5	<b>NU 2338 ECML/PEX</b>
<b>200</b>	276	400	–	138	377	253	5	2 280	2 800	255	1 600	2 400	96	<b>N 2340 ECMB/PEX</b>
<b>200</b>	276	420	358	138	377	253	5	2 280	2 800	255	1 600	2 800	97	<b>NJ 2340 ECML/PEX</b>
<b>200</b>	–	420	358	138	377	253	5	2 280	2 800	255	1 600	2 800	96,5	<b>NU 2340 ECML/PEX</b>
<b>220</b>	279	400	–	108	367	259	4	1 830	1 830	212	1 700	2 400	62	<b>N 2244 ECMB/PEX</b>
<b>220</b>	279	400	350	108	367	259	4	1 830	1 830	212	1 700	2 400	63,5	<b>NJ 2244 ECMA/PEX</b>
<b>220</b>	–	400	350	108	367	259	4	1 830	1 830	212	1 700	2 400	62,5	<b>NU 2244 ECMA/PEX</b>



### The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

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