WHY SKF?

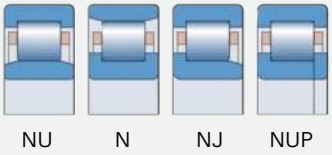
Why SKF Explorer single row cylindrical roller bearings?

SKF Explorer single row cylindrical roller bearings are engineered for demanding applications with high speeds and heavy loads.

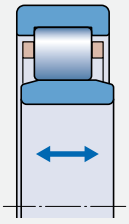
Featuring precision-engineered rollers and advanced cage designs, they offer excellent radial load capacity and speed capabilities. Their design allows for higher power density and downsizing of bearing arrangements due to their high load carrying capacity. With high stiffness, low friction, and axial displacement accommodation, these bearings support a long service life.

SKF's global manufacturing and distribution network provides access to these bearings in various sizes and combinations, delivering reliable performance in a range of demanding applications.

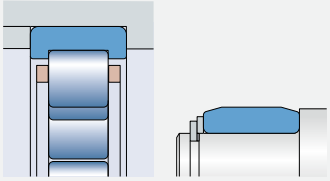
Technical advantages



Various design configurations are available for the inner and outer ring flanges, with differences in the position and number of guide flanges.



Accommodate axial displacements, except in bearings with flanges on both the inner and outer rings.



Separable and interchangeable components of SKF Explorer single row cylindrical roller bearings simplify mounting, dismounting, and maintenance inspections.

Special variants are available for specific application conditions, including hybrid ceramic bearings and coatings like INSOCOAT or black oxide. Contact your SKF representative to explore these options.

Hardness and dimensional stability

Manufactured with ultra-clean steel and a unique heat treatment process, SKF Explorer single row cylindrical roller bearings deliver maximum hardness for superior wear resistance which can contribute to extended service life. They offer high dimensional stability (up to +150 °C) depending on the cage material, resulting in increased reliability and longevity.

Lasting performance

The advanced design of SKF Explorer single row cylindrical roller bearings features a logarithmic roller profile that evenly distributes loads (**fig. 1**), minimizing stress peaks at the roller ends. This extends bearing service life and reduces sensitivity to misalignment and shaft deflections.

Engineered for smoothness

The advanced flange design as seen in **fig. 2**, combined with optimized roller ends and surface finish, enhances lubricant film formation, reducing friction and boosting axial load capacity.

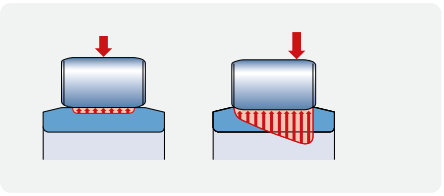


Fig. 1 – Load distribution for the logarithmic roller profile

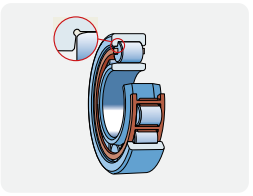
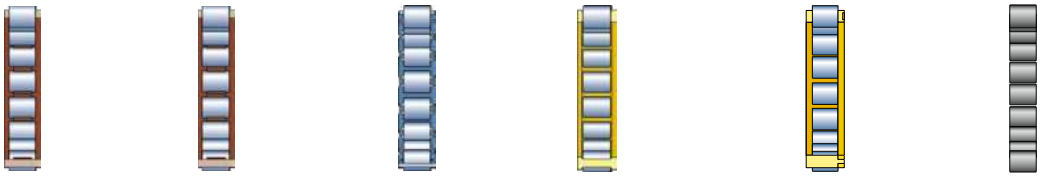


Fig. 2 –Open flange design

Cage variants for cylindrical roller bearings



	Polyamide cages[1]		Polyamide cages[1]		Steel cages J / -(no suffix)	Brass cages ML	Brass cages M	Full complement roller set[2]
Cage guidance	Roller centered		Outer ring centered		Roller centered	Outer ring centered one-piece design	Roller centered two-piece design	n.a.
Speed	+		++		+	+++	+++	0
Acceleration	+		++		+	+++	++	+
Vibration	+		++		+	+++	++	+
Weight	+++		+++		++	+	+	0
Low friction	+++		+++		++	++	++	0
Oil lubrication	+++		+++		++	+++	+++	+
Grease lubrication	+++		++		++	+	++	0
Material	PA66 (suffix P)	PEEK (suffix PH)	PA66 (suffix PA)	PEEK (suffix PHA)	Stamped steel	Brass cages	Brass cages	n.a.
Temperature resistance	+	+++	+	+++	++	+++	+++	n.a.
Chemical resistance	+	+++	+	+++	++	+++	+++	n.a.

Symbols: +++ Best ++ Very good + Good

[1] Glass fiber-reinforced | [2] The design without a cage is not part of the SKF Explorer range – this is for comparison only.

Close to you

Choosing SKF Explorer cylindrical roller bearings allows you to benefit from SKF's technical expertise and comprehensive support. From global customer service to expert application advice, SKF supports smooth and efficient operations throughout your bearing's lifecycle.

With the advanced simulation and calculation methods available in our tools like SKF SimPro Quick, SKF Product select at skf.com, we equip you to optimize operations and meet the demanding challenges of rotating equipment, from design through operation.

Supporting your sustainability goals

Your choice of components impacts sustainability. Thanks to a long bearing life and low friction, our bearings support reduced material and energy consumption, waste, and emissions. At SKF, we aim to decarbonize all our operations by 2030 and reach net-zero greenhouse gas emissions by 2050.

Read more on skf.com/sustainability.

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