

Secure production with sealed bearings

Double bearing service life with large size sealed SKF Explorer spherical roller bearings for high-pressure grinding rollers (HPGRs) and roller presses.



Sealed SKF Explorer spherical roller bearings are now available in large sizes

HPGRs and roller presses operate in challenging environments facing virtually inevitable dirt ingress and bearing grease loss. A common maintenance practice for open bearings is to purge the bearings with grease – adding expense, as well as health and safety risks for maintenance personnel. These assets are crucial for production processes, so any downtime can lead to costly manufacturing stops.

What if you could find a solution to keep lubrication in and contamination out? Providing longer meantime between failures, sealed SKF Explorer spherical roller bearings are a long-term investment for increased machine availability. Instead of stopping production for preventive maintenance of the bearing, the wear of the roller press roller becomes the limiting factor when doing service. The sealed bearings also reduce lubrication consumption by 95%, leading to less environmental impact and reduced cost. Combined with reduced maintenance requirements, the result is increased worker safety, and, ultimately, lower total cost of ownership.

Minimum 2x longer bearing service life for roller presses and HPGR

The sealed SKF Explorer spherical roller bearings offer doubled service life compared to open bearings. They have the potential to be remanufactured – twice – significantly extending service life. Additionally, since large size bearings are challenging to mount, and incorrect bearing fit on the shaft has proven to be another common cause of failure in large size bearings, we offer on-site mounting services and specialized tools that facilitate installation.

The bearings can be sold as a stand-alone solution, or as part of a broader [SKF Rotating Equipment Performance program](#), along with [SKF seals](#), [lubrication systems](#), [condition monitoring](#), [services](#), and [remanufacturing](#).



2x

longer bearing service life,
increasing operational
availability and cutting
Total Cost of Ownership (TCO)

95%

reduced grease
consumption,
cutting costs and
environmental footprint

2x

double
remanufacturing
potential, extending
bearing service life

Switching to sealed spherical roller bearings

We have a wide assortment of large-size sealed SKF spherical roller bearings. The table below shows the most common HPGR designations, but other variants are available. Simply find the specification that corresponds with your existing open bearing.

You can also find the correct withdrawal sleeve to help to mount the bearing correctly.



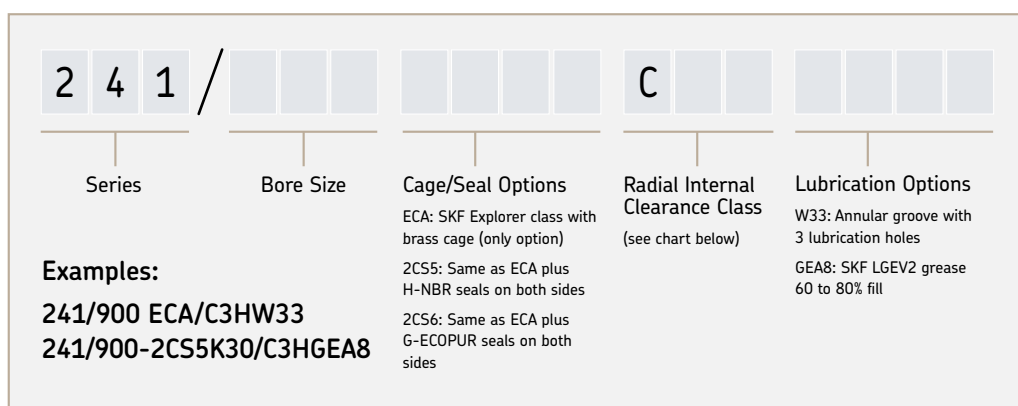
SKF Explorer large-size spherical roller bearing range, with standard and sealed options

See back page for the designation system and available radial internal clearances.

Standard part number	Sealed part number	Withdrawal sleeve
241/500 ECAK30/C3HW33	241/500-2CS5K30/C3HGEA8	AOH 241/500
241/560 ECAK30/C3HW33	241/560-2CS5K30/C3HGEA8	AOH 241/560 G
241/600 ECAK30/C3HW33	241/600-2CS5K30/C3HGEA8	AOH 241/600
241/670 ECAK30/C3HW33	241/670-2CS5K30/C3HGEA8	AOH 241/670 G
241/710 ECAK30/C3HW33	241/710-2CS5K30/C3HGEA8	AOH 241/710
241/750 ECAK30/C3HW33	241/750-2CS5K30/C3HGEA8	AOH 241/750 G
241/800 ECAK30/C3HW33	241/800-2CS5K30/C3HGEA8	AOH 241/800 G
241/850 ECAK30/C3HW33	241/850-2CS5K30/C3HGEA8	AOH 241/850 G
241/900 ECAK30/C3HW33	241/900-2CS5K30/C3HGEA8	AOH 241/900
241/950 ECAK30/C3HW33	241/950-2CS5K30/C3HGEA8	AOH 241/950
241/1000 ECAK30/C3HW33	241/1000-2CS5K30/C3HGEA8	AOH 241/1000
241/1060 ECAK30/C3HW33	241/1060-2CS6K30/C3HGEA8	AOH 241/1060
241/1120 ECAK30/C3HW33	241/1120-2CS6K30/C3HGEA8	AOH 241/1120
241/1180 ECAK30/C3HW33	241/1180-2CS6K30/C3HGEA8	AOH 241/1180
241/1250 ECAK30/C3HW33	241/1250-2CS6K30/C3HGEA8	AOH 241/1250
*BS2-8138 ECAK30/C3HLW33	BS2-8138-2CS6K30/C3HLGEA8	N/A
*BS2B 247721/C3H	BS2B 247721-2CS5K/C3HGEA8	N/A

*Part number with special features developed from 241 bearing family for select HPGR type.

Large-size spherical roller bearings for HPGR and roller press: Designation system



Why are there multiple radial internal clearance class options for spherical roller bearings in roller press applications?

Bearing clearances make significant influences on bearing performance. Temperature can vary depending on the ambient temperature of the mill, temperature of the material to be ground, and temperature differences between inner ring and outer ring. In addition, as heat generation can be large, machine design generally comprises water cooling systems in the housing and/or bearing shaft, making temperature estimation even more difficult.

The goal is to select a good compromise to get some clearance in operation and to distribute the load over the largest possible number of rollers, due to the heavy loads being supported. The more rollers that carry the load, the lower the maximum pressure on the most loaded roller.

In any operating condition, the bearing must have radial clearance, particularly during cold start-up, to avoid loss of internal clearance.

Clearances vary by roller press OEM. Radial internal clearances available for SKF's large-size spherical roller bearings are shown below.

C2		CN		C3		C4		C5	
C2L	C2H	CNL	CNH	C3L	C3H	C4L	C4H	C5L	C5H
C2P		CNP		C3P		C4P			

For more information on large-size sealed SKF Explorer spherical roller bearings, visit our [website](https://www.skf.com/us).

[skf.com/us](https://www.skf.com/us)

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PUB 73/P2 18648 EN.US • December 2021 • 21048