



Ball Bearings for Generators and Electric Motors

Modular system for a wide range of applications

Schaeffler's new series of FAG ball bearings for generators and electric motors are specifically tailored to the customer's needs. All of these bearings feature a sheet steel cage, which provides the following advantages compared to a standard solid brass cage:

- Easier bearing relubrication in the application
- Reduced weight
- Reduced noise generation thanks to optimized cage pocket geometry

The series includes two variants that additionally provide protection against the passage of current by means of either coated inner or outer rings or ceramic balls.
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FAG

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Ball Bearings for Generators and Electric Motors



Standard steel variant
(e. g. 6330-G)



Variant with current-insulating coating (e. g. 6330-G-J20GA)



Variant with current-insulating ceramic balls (e. g. HC6330-G)

The new series of ball bearings bears the suffix “-G” (e.g. 6330-G) and features the same outside dimensions as standard deep groove ball bearings according to DIN 620. The design has been customized for use in generators and electric motors. Three variants are available depending on the application:

Standard steel variant (e. g. 6330-G)

- All components made from high-quality bearing steel
- Easier relubrication thanks to the sheet steel cage
- Reduced noise generation due to optimized cage pocket geometry

Variant with current-insulating coating (e. g. 6330-G-J20GA):

- Inner or outer ring coated with Schaeffler’s INSUTECT (ceramic) coating
- Secure protection against disruptive voltages of 1,000V DC to 5,000V DC through the use of different coating thicknesses
- INSUTECT coating provides outstanding protection even in high levels of humidity

Variant with current-insulating ceramic balls (e. g. HC6330-G):

- Rolling elements made from high-quality ceramic material provide optimum insulation protection
- Longer bearing and grease operating life
- Ceramic balls ensure optimum emergency running characteristics

The bearing characteristics are described as follows in the product designation:

HC 63 30 - G - P5 - J20GA - C3	
BALLS	RADIAL INTERNAL CLEARANCE (acc. to ISO 5753)
HC Ceramic balls	CN Standard – normal
-- Steel balls	C3 Larger than CN
SERIES	C4 Larger than C3
63 Single-row metric ball bearing	INSUTECT COATING
BORE	J20G 5,000V DC Outer ring coated (~ 700 µm)
30 150 mm	J20GA 3,000V DC Outer ring coated (~ 300 µm)
32 160 mm	J20GB 1,000V DC Outer ring coated (~ 120 µm)
34 170 mm	J20GC 3,000V DC Inner ring coated (~ 300 µm)
36 180 mm	TOLERANCE CLASS
GEOMETRY	PN Standard – tolerances
G Optimized design for generators and electric motors	P6 Narrower tolerances than PN
CAGE	P5* Narrower tolerances than P6
JN Standard – riveted sheet steel cage	BEARING DESIGNATION EXAMPLES
DIMENSION STABILIZATION	6330-G Steel rings, steel balls, riveted sheet steel cage
S1 Standard – dimensionally stabilized up to 200°C	6330-G-J20GA Coated outer ring, steel inner ring, steel balls, riveted sheet steel cage
	HC6330-G Steel rings, ceramic balls, sheet steel cage

* For tolerance class P5 with ring coating, please contact our application engineer.

Note: Standard’s are not shown in the designation