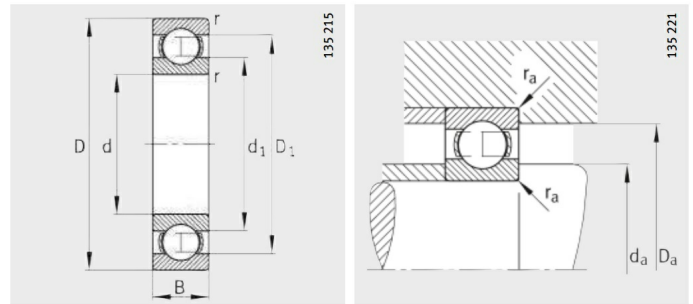


6009

Deep groove ball bearings open design, self-retaining



Mounting dimensions
Open design

Technical sheet of 6009

What are the Benefits of choosing 6009 bearings?

- **Versatile Load Bearing:** Capable of simultaneously withstanding radial and bidirectional axial loads, suitable for high-speed and ultra-high-speed applications.
- **Low Friction and Long Life:** Optimized contact between the raceway and steel balls results in an extremely low coefficient of friction, minimal heat generation, and a long service life.
- **High Speed Capability:** Due to high operational precision, it allows for very high maximum speeds.
- **Low Maintenance Costs:** Can be designed with dust covers or sealing rings for lifetime lubrication, requiring no routine maintenance.
- **Rigid and Quiet Operation:** Provides a certain level of rotational stiffness while maintaining low operating noise and vibration levels.

Type :	Single row deep groove ball bearings	
Model :	6009	
Old Code :	109	
Main demensions :	45 mm × 75 mm × 16 mm	Bore Dia × Outside Dia × Width Dia
M kg:	0.236	Mass
HS Code :	8482102000	Bearing customs code
d mm:	45	inner ring diameter

D mm:	75	Outer ring diameter
B(T) mm:	16	Overall Width
Cr kN:	21.102	Radial dynamic load rating
C_{0r} kN:	14.31	Radial static load rating
Grease r/min:	9666	Reference speed
Oil r/min:	13061	Limiting speed

Detailed parameters and installation dimensions:

Part Number	6009
Series	60
Bearing Mass - m	0.236 kg 0.520 lb
Reference speed - n_B	9666 min ⁻¹
Limiting speed - n_G	13061 min ⁻¹
Reference From	FAG 6009
Dimension Inside - d ϕ (mm)	45
Dimension Outside - D Φ (mm)	75
Dimension Width - B (mm)	16
Bore Type	Z = Cylindrical bore
Bearing Type	Deep groove ball bearings open design, self-retaining
Dimension - D ₂	67.98 mm 2.676 inch
Dimension - r(min.)	1 mm 0.039 inch
Dimension - D ₁	65.6 mm 2.583 inch
Dimension - d ₁	54.2 mm 2.134 inch
Rows NO.	one
Mounting dimensions - d _a (min.)	49.6 mm 1.953 inch
Seal	Open
Mounting dimensions - D _a (max.)	70.4 mm 2.772 inch
Mounting dimensions - r _a (max.)	1 mm 0.039 inch
Cage	JN = Stamping steel cage
RIC	CN
Manufacturer Part Code	6009
Radial Dynamic Capacity - C _r	21102 N 4743 lbf
Radial static Capacity - C _{0r}	14310 N 3216 lbf
Heat stabilization	SN = (up to 120 °C)
Lubricant	Without
Dimension Inside - d ϕ (inch)	1.772
Dimension Outside - D Φ (inch)	2.953
Dimension Width - B (inch)	0.630
Temperature - T(min)	-30°C
Temperature - T(max)	120°C
Radial Fatigue Capacity - C _{ur}	727 N 163 lbf

Coefficient - F ₀	15.3
Ring Material	GCr15SiMn

What are the applications of the 6009 bearing?

- **Motors/Electrical Appliances:** Used in motors and home appliances. Ensures smooth high-speed operation and low noise.
- **Automotive Industry:** Used in generators and gearboxes. Suitable for medium loads and offers high reliability.
- **General Machinery:** Used in pumps, fans, and speed reducers. Low friction, maintenance-free, and long service life.

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