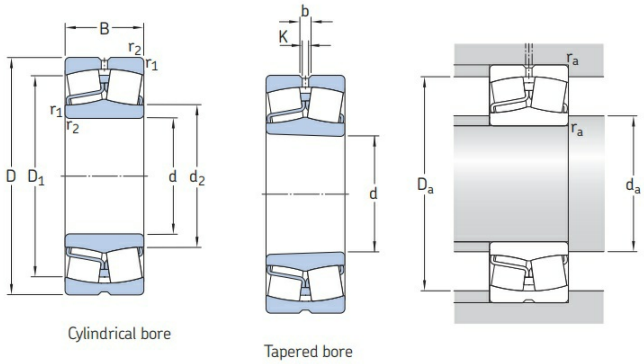
24132CC/C4W33

Spherical roller bearings, double row



Technical sheet of 24132CC/C4W33

What are the Benefits of choosing 24132CC/C4W33 bearings?

- **Self-aligning:** Automatically compensates for shaft bending or installation errors, making it less prone to damage.
- **High load-bearing capacity:** Capable of withstanding extremely heavy radial loads and a certain amount of axial impact.
- **Adaptable to harsh working conditions:** Durable and rigid, suitable for heavy-duty, vibration, and dusty environments.

Type :		Spherical Roller Bearings
Model :		24132CC/C4W33
Main demensions :	160 mm × 270 mm × 109 mm	Bore Dia × Outside Dia × Width Dia
M kg:	25	Mass
HS Code :	8482300000	Bearing customs code
d mm:	160	inner ring diameter
D mm:	270	Outer ring diameter
B(T) mm:	109	Overall Width
Cr kN:	1226.228	Radial dynamic load rating

C0r kN:	1759.163	Radial static load rating
Grease r/min:	1297	Reference speed
Oil r/min:	1879	Limiting speed

Detailed parameters and installation dimensions:

Part Number	24132CC/C4W33
Internal design	CC = Flangeless inner ring, guide ring centred on the inner ring, two stamped steel cages
Bearing Type	Spherical roller bearings, double row
Bearing Mass - m	25 kg | 55.115 lb
Seal	open
Series	241..-CC/W33
Cage	CC = stamped steel cages
Lubrication	W33 = Annular groove and three lubrication holes in the outer ring
Bore Type	Z = cylindrical bore
RIC	C4
Units	Metric
Rows NO.	2
Manufacturer Part Code	24132 CC/C4W33
Ring Material	GCr15SiMn
Roller Material	GCr15SiMn
Dimension	
Inside - d φ (mm)	160 mm | 6.299 inch
Outside - D Φ (mm)	270 mm | 10.630 inch
Width - B (mm)	109 mm | 4.291 inch
b	8.3 mm | 0.327 inch
K	4.5 mm | 0.177 inch
d_2	181 mm | 7.126 inch
D_1	228 mm | 8.976 inch
Fillet - r_a(max.)	2 mm | 0.079 inch
Fillet - r_1,r_2(min.)	2.1 mm | 0.083 inch
Angular misalignment	2.5 degrees
Performance	
Dynamic Radial Capacity - C_r	1226228 N | 275656 lbf
Static Radial Capacity - C_{0r}	1759163 N | 395459 lbf
Fatigue Radial Capacity - P_u	162098 N | 36439 lbf
Temperature - T(min)	-30
Temperature - T(max)	+200
Speed ratings (grease) - n_B	1297 rpm
Speed ratings (oil) - n_G	1879 rpm

Heat stabilization	392 °F (200 °C)
Abutment dimensions	
d_a(min.)	172 mm | 6.772 inch
D_a(max.)	258 mm | 10.157 inch
Calculation factor	
e	0.4
Y_1	1.7
Y_2	2.5
Y_0	1.6

What are the applications of the 24132CC/C4W33 bearing?

- **Metallurgy and Mining:** Rolling mills, crushers, vibrating screens, roller conveyors (withstanding high impact loads and compensating for shaft deflection under immense pressure).
- **Paper and Printing:** Press sections of paper machinery, printing presses (maintaining reliability and stability in humid, hot, and high-speed operating environments).
- **Energy and Environmental Protection:** Wind turbine main shafts, cement plant equipment, pellet mills (coping with heavy loads, vibrations, and harsh operating conditions, extending equipment lifespan, and reducing maintenance costs).
- **General Industry and Transportation:** Various speed reducers, gearboxes, railway vehicle axles (powerful radial load capacity, capable of withstanding bidirectional axial loads simultaneously).
- **Woodworking and Processing:** Woodworking machinery (suitable for cutting and processing scenarios with vibration and moderate loads).

How should choose the right model for a Spherical Roller Bearings?

1. Verify load and direction: Confirm that the bearing can withstand high radial loads and bidirectional axial loads. Generally, the axial load should not exceed 15-20% of the radial load, and in extreme cases, it should not exceed 35%, otherwise uneven stress may occur.

2. Confirm dimensions and tolerances: Determine the bore diameter, outer diameter, and width based on the installation space, and select the tolerance grade (e.g., PN grade) according to standards such as DIN 635-2 or ISO 15.

3. Select internal design: Select the cage type (e.g., CA type brass cage) and lubrication features (e.g., W33 outer ring oil groove and oil hole) according to the application.

4. Consider self-aligning capability: Check its maximum permissible self-aligning angle (usually 1° to 2°) to ensure it can compensate for installation errors or shaft deflection.

What is the mounting procedure for 24132CC/C4W33 bearings?

1. Preparation and Cleaning: Before installation, be sure to clean the shaft and bearing housing, and check all mating surfaces for burrs or damage.

2. Heated Installation (Recommended): For interference fits, use an induction heater to evenly heat the bearing to 80-100°C, then quickly push it onto the shaft, pressing it against the shaft shoulder. Do not exceed 120°C to avoid altering the material structure.

3. Cold Installation (Alternative): If heating is not possible, use an installation sleeve and press to apply pressure only to the inner ring to press the bearing into place.

4. Securing and Lubrication: Tighten the bearing with a lock nut, etc., and add an appropriate amount of grease through the oil groove/hole.

5. Final Inspection: Manually rotate the shaft to confirm smooth rotation without abnormal noise, and recheck the bearing clearance.

Special Note for mounting 24132CC/C4W33 bearings?

Load Limitation: Avoid prolonged exposure to excessive (>20%) pure axial loads, as this may overload the single-row rollers and significantly shorten their lifespan.

Temperature Control: During heated installation, strictly adhere to the 80-100℃ range to prevent localized overheating.

Appropriate Lubrication: Double-row bearings require more grease, but the filler amount is generally 30%-60% of the bearing's internal space; excessive grease can easily cause overheating.

Installation Tools: Never directly strike the bearing's outer ring, cage, or rolling elements. Use specialized tools to apply force only to the mating rings.

Operational Monitoring: During the first run after installation, monitor temperature, vibration, and noise to ensure smooth operation.

Have you already decided on a specific model, or are you hesitating between several models? Tell me the model or application scenario, and I can help you analyze whether the selection is appropriate.

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