

# 4212 ATN9 Double row deep groove ball bearing



## Double row deep groove ball bearing

Double row deep groove ball bearings correspond, in their design and operation, to a pair of single row deep groove ball bearings. They are robust in operation, requiring little maintenance, can operate at high speeds and accommodate radial and axial loads in both directions. They are slightly wider than single row bearings of the same bore and outside diameter but have a considerably higher load carrying capacity.

- Versatile and robust design
- High-speed capability
- Accommodate high axial and radial loads in both directions
- Require little maintenance

## Overview

### Dimensions

|                  |        |
|------------------|--------|
| Bore diameter    | 60 mm  |
| Outside diameter | 110 mm |
| Width            | 28 mm  |

### Performance

|                           |             |
|---------------------------|-------------|
| Basic dynamic load rating | 57.2 kN     |
| Basic static load rating  | 55 kN       |
| Reference speed           | 9 500 r/min |
| Limiting speed            | 5 300 r/min |

### Properties

|                                      |               |
|--------------------------------------|---------------|
| Filling slots                        | Without       |
| Number of rows                       | 2             |
| Locating feature, bearing outer ring | None          |
| Bore type                            | Cylindrical   |
| Cage                                 | Non-metallic  |
| Matched arrangement                  | No            |
| Radial internal clearance            | CN            |
| Tolerance class                      | Normal        |
| Material, bearing                    | Bearing steel |
| Coating                              | Without       |
| Sealing                              | Without       |
| Lubricant                            | None          |
| Relubrication feature                | Without       |

# Technical Specification

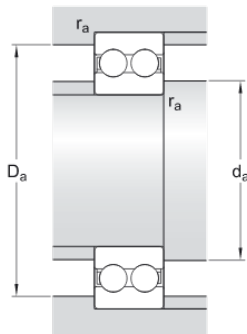


## Dimensions

|           |             |                   |
|-----------|-------------|-------------------|
| d         | 60 mm       | Bore diameter     |
| D         | 110 mm      | Outside diameter  |
| B         | 28 mm       | Width             |
| $d_1$     | ≈ 75.6 mm   | Shoulder diameter |
| $D_1$     | ≈ 90.4 mm   | Shoulder diameter |
| $r_{1,2}$ | min. 1.5 mm | Chamfer dimension |

## Abutment dimensions

|       |             |                                   |
|-------|-------------|-----------------------------------|
| $d_a$ | min. 69 mm  | Diameter of shaft abutment        |
| $D_a$ | max. 101 mm | Diameter of housing abutment      |
| $r_a$ | max. 1.5 mm | Radius of shaft or housing fillet |



## Calculation data

|                           |       |             |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C     | 57.2 kN     |
| Basic static load rating  | $C_0$ | 55 kN       |
| Fatigue load limit        | $P_u$ | 2.36 kN     |
| Reference speed           |       | 9 500 r/min |
| Limiting speed            |       | 5 300 r/min |
| Minimum load factor       | $k_r$ | 0.05        |
| Calculation factor        | $f_0$ | 15.2        |

## Mass

|              |        |
|--------------|--------|
| Mass bearing | 1.1 kg |
|--------------|--------|

## Tolerance class

|                        |        |
|------------------------|--------|
| Dimensional tolerances | Normal |
| Radial run-out         | Normal |

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