



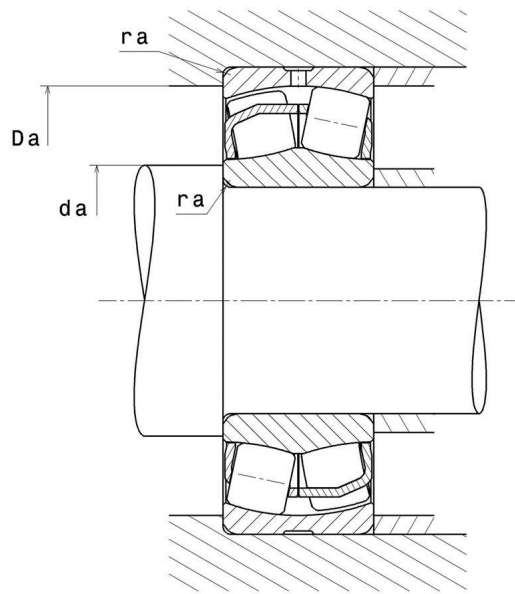
**Technical data**

**22311EAW33C3**  
Spherical roller bearings

Spherical roller bearing, pressed steel cage, groove and lubrication holes on outer ring

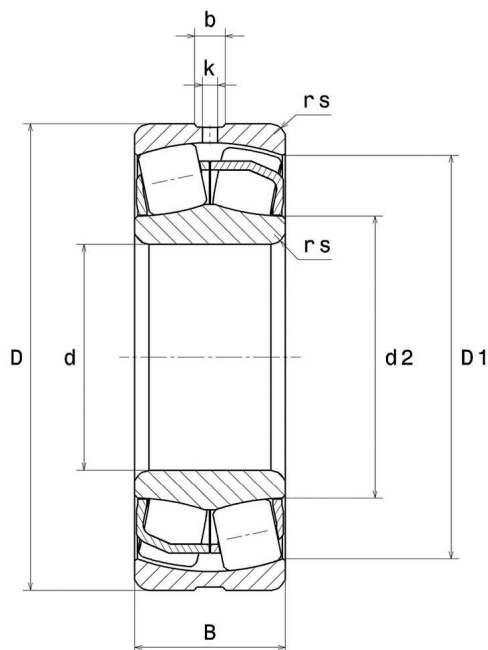
**ULTAGE**

**VISUAL (S)**



# 22311EAW33C3

Spherical roller bearings



## PRODUCT DIMENSIONS

|  |          |
|--|----------|
| <b>Internal diameter d</b>             | 55 mm    |
| <b>External diameter D</b>             | 120 mm   |
| <b>Bearing/Inner ring width(B)</b>     | 43 mm    |
| <b>External diameter inner ring d2</b> | 68,7 mm  |
| <b>Inner diameter outer ring D1</b>    | 102,9 mm |
| <b>Min fillet radius rs</b>            | 2 mm     |
| <b>Number of lubrication holes</b>     | 3 or 4   |
| <b>Groove width (b)</b>                | 7,83 mm  |
| <b>Hole diameter (k)</b>               | 3,5 mm   |
| <b>Coef e</b>                          | 0.36     |
| <b>Lower axial load coef (Y1)</b>      | 1.87     |
| <b>Upper axial load coef (Y2)</b>      | 2.79     |
| <b>Static axial load coef (Y0)</b>     | 1.83     |
| <b>Radial clearance class</b>          | C3       |
| <b>Mass</b>                            | 2,29 kg  |
| <b>Brand</b>                           | SNR      |

## PRODUCT PERFORMANCE

|                        |        |
|------------------------|--------|
| <b>Dynamic load, C</b> | 296 kN |
|------------------------|--------|

### PRODUCT PERFORMANCE

|  |             |
|--|-------------|
| <b>Static load, C0</b>                               | 274 kN      |
| <b>Fatigue limit load, Cu</b>                        | 33,4 kN     |
| <b>Reference thermal speed (Nref)</b>                | 4600 tr/min |
| <b>Mechanical Limit Speed Nlim</b>                   | 5600 tr/min |
| <b>Min operating temperature, Tmin</b>               | -40 °C      |
| <b>Max operating temperature, Tmax</b>               | 200 °C      |
| <b>Characteristic cage frequency, FTF</b>            | 0.401 Hz    |
| <b>Characteristic rolling element frequency, BSF</b> | 4.703 Hz    |
| <b>Characteristic outer ring frequency, BPF0</b>     | 5.61 Hz     |
| <b>Characteristic inner ring frequency, BPFI</b>     | 8.39 Hz     |

### ABUTMENT

|   |        |
|---|--------|
| <b>Max shoulder diameter IR da max</b>              | 0 mm   |
| <b>Min shoulder diameter IR da min</b>              | 66 mm  |
| <b>Max shoulder diameter OR Da max</b>              | 109 mm |
| <b>Max shaft &amp; housing fillet radius ra max</b> | 2 mm   |

**INDUSTRY CALCUL FACTORS**

**Equivalent dynamic radial load**

$$P = X.F_r + Y.F_a$$

| Fa / Fr ≤ e |    | Fa / Fr > e |    |
|-------------|----|-------------|----|
| X           | Y  | X           | Y  |
| 1           | Y1 | 0.67        | Y2 |

**Equivalent static radial load**

$$P_0 = X_0.F_r + Y_0.F_a$$

| X <sub>0</sub> | Y <sub>0</sub> |
|----------------|----------------|
| 1              | Y0             |

The values for e, Y1, Y2 and Y0 are shown in the above table .