

# 22218EAKE4 NSK D\_a max 150 90x160x40mm Spherical roller bearings

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| Bearing number                | 22218EAKE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Size (mm)                     | 90x160x40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Brand                         | NSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Bore Diameter (mm)            | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Outer Diameter (mm)           | 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Width (mm)                    | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| d                             | 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D                             | 160 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| B                             | 40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C                             | 40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| r min.                        | 2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| da min.                       | 100 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| da max.                       | 108 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Da min.                       | 142 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Da max.                       | 150 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ra max.                       | 2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Weight                        | 3.3 Kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Basic dynamic load rating (C) | 289 kN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Basic static load rating (C0) | 395 kN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Lubrication Speed (Grease)    | 2800 r/min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Lubrication Speed (Oil)       | 3600 r/min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Calculation factor (a)        | 0.24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Calculation factor (Y0)       | 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Calculation factor (Y2)       | 4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Category                      | Spherical Roller Bearings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| BSI Inventory                 | 9.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Manufacturer Name             | NSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Minimum Buy Quantity          | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Weight / Kilogram             | 3.36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Part                          | 02020401403                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product Group - BDI           | 094311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Internal Clearance            | CO-Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mounting Method               | Adapter Mount                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Bearing Element               | Spherical Roller Bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Bore Profile                  | Tapered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Cage Material                 | Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Enclosure                     | Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Number of Rows of Rollers     | Double Row                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Relubricatable                | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Withdrawal Sleeve             | HS318 (Specify bore)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Inch - Metric                 | Metric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Long Description              | 50MM Tapered Bore; 160MM Outside Diameter; 40MM Width; CO-Medium Clearance; Adapter Mount; Double Row of Spherical Roller Bearings; Steel Cage Material; Open Enclosure; Relubricatable; Adapter Part Number - HS18 (Specify bore)                                                                                                                                                                                                                                                                                                                   |
| Other Features                | Order adapter or withdrawal sleeve or not separately. Others may be available                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Category - BDI                | Spherical Roller Bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| HSIC                          | 311110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Harmonized Tariff Code        | 8402000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Mean                          | Bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Keyword String                | Spherical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Manufacturer URL              | <a href="http://www.nskamericas.com">http://www.nskamericas.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Manufacturer Item Number      | 22218EAKE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Weight / LBS                  | 3.36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Adapter Part Number           | 50M18 HS18 HS318 HS318 (Specify bore) Inch   HS18 (Specify bore) Millimeter                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Width                         | 3.575 Inch   40 Millimeter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Outside Diameter              | 6.299 Inch   160 Millimeter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Bore                          | 3.543 Inch   90 Millimeter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| bore diameter:                | 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| maximum rpm:                  | 4800 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| outside diameter:             | 160 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| operating temperature range:  | Maximum of +200 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| overall width:                | 40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| cage material:                | Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| bore type:                    | Tapered 1:12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| bearing material:             | Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| outer ring type:              | Not Split                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| cage type:                    | Roller Guided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| internal clearance:           | CR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| precision rating:             | HBC 1 (ISO Class Normal)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| closure type:                 | Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| finish/coating:               | Uncoated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| lubrication hole type:        | Lubrication Groove & Hole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| outer ring width:             | 40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| dynamic load capacity:        | 360000 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| fatigue failure:              | 2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| static load capacity:         | 395000 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| series:                       | 222                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| YS                            | 2.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ISO9001                       | 22218EAKE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Length                        | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| YS                            | 2.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| D                             | 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| YS                            | 4.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Max rpm                       | 5000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B                             | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CAD                           | <a href="https://service.web2cad.co.jp/pcse/maker_login.php?maker=NSK_&amp;language=j&amp;info=nsk_r/roller_bearings/spherical_rb/tapered_bore_amb&amp;prj=sk&amp;st=ST&amp;HP=1">https://service.web2cad.co.jp/pcse/maker_login.php?maker=NSK_&amp;language=j&amp;info=nsk_r/roller_bearings/spherical_rb/tapered_bore_amb&amp;prj=sk&amp;st=ST&amp;HP=1</a> (ORDER=22218EAKE4) (SD=90) (D=160) (B=40) (C)= (CR)=360000 (L1=3800) (L2=3800) (L3=3200) (L4=4000) (DA1=180) (DA2=180) (DA3=150) (DA4=142) (EA=2.5) (E)=4.3 (F)=2.5 (F)=2.5 (GMS=3-18) |
| da min.                       | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ISO9001                       | ecat_R55PMB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Oil rpm                       | 4800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| YS                            | 2.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| max                           | 3.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| CRS rpm                       | 3200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| a                             | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TSR rpm                       | 3600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CO                            | 395                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| NS                            | 155_153                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| IS                            | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Prod_Type3                    | SRB_C16_18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| YS                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| YS                            | 0.43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SR                            | 35.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| a                             | 0.24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| YS                            | 17.43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| bore                          | 22218EAKE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ALP2                          | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ALP1                          | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ALP3                          | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| D_a_max                       | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| D_a_min                       | 142                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| YS01                          | 22218EAKE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| MS                            | NSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ALPHA                         | 0.156                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SM                            | 137.669                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| a                             | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| KMG                           | 2328                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SMG                           | 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| IS                            | 100_004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| calc01                        | /bearingguide/html/calculation.jsp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |