# Double row angular contact ball bearing

<table>
<thead>
<tr>
<th>Bearing Designation</th>
<th>3205E</th>
</tr>
</thead>
</table>

## Dimensions (mm)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>d</td>
<td>25</td>
</tr>
<tr>
<td>D</td>
<td>52</td>
</tr>
<tr>
<td>B</td>
<td>20,6</td>
</tr>
<tr>
<td>r_a min</td>
<td>1,00</td>
</tr>
<tr>
<td>a</td>
<td>35</td>
</tr>
</tbody>
</table>

## Abutment and Fillet Dimensions (mm)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>d_a max</td>
<td>31,00</td>
</tr>
<tr>
<td>D_a max</td>
<td>42,00</td>
</tr>
<tr>
<td>r_a max</td>
<td>1,000</td>
</tr>
</tbody>
</table>

## Basic Load Rating (kN)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>18,940</td>
</tr>
<tr>
<td>C^0</td>
<td>18,088</td>
</tr>
</tbody>
</table>

## Weight [kg]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>0,180</td>
</tr>
</tbody>
</table>

## Limiting Speed for Lubrication (min^-1)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grease</td>
<td>8400</td>
</tr>
<tr>
<td>Oil</td>
<td>10000</td>
</tr>
</tbody>
</table>
## Tolerance Class

### Inner Ring

<table>
<thead>
<tr>
<th>Tolerance Class</th>
<th>( \Delta_{dmp} )</th>
<th>( \Delta_{dmp} - \Delta_{dp} )</th>
<th>( \Delta_{dp} )</th>
<th>( \Delta_{dmp} - \Delta_{dp} )</th>
<th>( \Delta_{dp} )</th>
<th>( \Delta_{dp} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0</td>
<td>0</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>P6</td>
<td>0</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

### Outer Ring

<table>
<thead>
<tr>
<th>Tolerance Class</th>
<th>( \Delta_{dmp} )</th>
<th>( \Delta_{dp} )</th>
<th>( \Delta_{dp} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0</td>
<td>0</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>P6</td>
<td>0</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>

1) Valid in any bore radial plane
2) \( \Delta_{dmp} \) - Valid only for bearings in diameter series 2, 3 and 4  
* P6 - Valid only for bearings in diameter series 0, 1, 2, 3 and 4

### Axial Clearance

<table>
<thead>
<tr>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>min</td>
<td>max</td>
<td>min</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>8</td>
</tr>
</tbody>
</table>
Tolerance Symbols and Their Meaning

d
 nominal bore diameter

\( d' \)
 nominal diameter of larger theoretical tapered bore diameter

\( d_2 \)
 nominal diameter of the shaft washer of double direction thrust bearings

\( \Delta_{rb} \)
 deviation of single bore diameter from nominal

\( \Delta_{mrb} \)
 mean cylindrical bore diameter deviation in single radial plane

(for tapered bore \( \Delta_{mrb} \) is valid for theoretical bore diameter)

\( \Delta_{mrb} \)
 deviation of mean larger theoretical diameter of tapered bore

\( \Delta_{dfr} \)
 mean shaft washer bore diameter deviation of double direction thrust bearings in single radial plane

\( V_{rb} \)
 single bore diameter variation in single radial plane

\( V_{mrb} \)
 mean cylindrical bore diameter variation

\( V_{dfr} \)
 shaft washer bore diameter variation of double direction thrust bearings in single radial plane

\( D \)
 nominal outside diameter

\( \Delta_{os} \)
 deviation of single outside diameter from the nominal dimension

\( \Delta_{osmp} \)
 mean outside cylindrical surface diameter deviation in single plane

\( V_{os} \)
 single outside cylindrical surface diameter variation in single radial plane

\( V_{osmp} \)
 mean outside cylindrical surface diameter variation

\( B \)
 inner ring nominal width

\( T_1 \)
 total nominal width of tapered roller bearings

\( T' \)
 nominal effective width of cup sub-unit

\( T'' \)
 nominal effective width of cone sub-unit

\( H \)
 rated width of unidirectional axial bearing

\( H_1 \)
 rated height of unidirectional ball axial bearing including the body ring

\( H_2 \)
 rated height of bidirectional axial bearing

\( H_3 \)
 rated height of bidirectional axial ball bearing including body rings

\( H_3' \)
 rated height of spherical-roller bearing

\( \Delta_{rb} \)
 inner ring single width deviation

\( \Delta_{rtr} \)
 outer ring single width deviation

\( \Delta_{rb} \)
 bearing single width deviation (total)

\( \Delta_{rtr} \)
 cone sub-unit effective width deviation

\( \Delta_{rtr} \)
 cup sub-unit effective width deviation

\( \Delta_{a1s} \)
 height deviation of single direction axial bearings from nominal value

\( \Delta_{a1s} \)
 height deviation of single direction axial ball bearings with spherded housing washer from nominal value

\( \Delta_{a1s} \)
 height deviation of double direction axial bearings from nominal value

\( \Delta_{a1s} \)
 height deviation of double direction axial ball bearings with spherded housing washer from nominal value

\( \Delta_{a1s} \)
 height deviation of axial spherical-roller bearing from the rated value

\( C \)
 outer ring nominal width

\( V_{os} \)
 inner ring single width variation

\( V_{os} \)
 outer ring single width variation

\( K' \)
 radial runout of assembled bearing inner ring

\( K'' \)
 radial runout of assembled bearing outer ring

\( S_1 \)
 shaft washer raceway axial runout

\( S_2 \)
 housing washer raceway axial runout

\( S_3 \)
 inner ring flat seat face axial runout of assembled bearing

\( S_4 \)
 outer ring flat seat face axial runout of assembled bearing

\( S_5 \)
 flat seat face axial runout

\( S_6 \)
 runout of supporting face towards seat face for single row tapered roller bearings