GGB-DB®

CAST BRONZE BUSHINGS
WITH SOLID LUBRICANT INSERTS

APPLICATIONS

Industrial – Offshore industry, underwater equipment, bridges and civil engineering, iron and steel industry equipment, cranes and conveyors, deep and open cast mining equipment, construction and earthmoving equipment, etc.

CHARACTERISTICS

— Maintenance-free bearing material for heavy duty applications
— Excellent performance under high loads and intermittent operation
— Available with PTFE or graphite inserts for temperatures above 250°C

AVAILABILITY

Bearing forms made to order: Cylindrical bushes, flanged bushes, thrust washers, sliding plates, pintle bearings, half-bearings, axial and radial segment rings, self-aligning spherical bearings, customized bearing designs

For questions and assistance, contact a GGB engineer at: https://www.ggbearings.com/en/contact
## BEARING PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>Value DB^B/11</th>
<th>Value DB^B/16</th>
<th>Value DB^C/11</th>
<th>Value DB^C/16</th>
<th>Value DB^D/11</th>
<th>Value DB^D/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Yield Strength</td>
<td>N/mm^2</td>
<td>97</td>
<td>97</td>
<td>275</td>
<td>275</td>
<td>414</td>
<td>414</td>
</tr>
<tr>
<td>Minimum Tensile Strength</td>
<td>N/mm^2</td>
<td>207</td>
<td>207</td>
<td>620</td>
<td>620</td>
<td>758</td>
<td>758</td>
</tr>
<tr>
<td>Hardness</td>
<td>HB</td>
<td>75</td>
<td>75</td>
<td>190</td>
<td>190</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>Elongation (% in 50 mm)</td>
<td>%</td>
<td>15</td>
<td>15</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

## MECHANICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Yield Strength</td>
<td>N/mm^2</td>
<td>97</td>
</tr>
<tr>
<td>Minimum Tensile Strength</td>
<td>N/mm^2</td>
<td>207</td>
</tr>
<tr>
<td>Hardness</td>
<td>HB</td>
<td>75</td>
</tr>
<tr>
<td>Elongation (% in 50 mm)</td>
<td>%</td>
<td>15</td>
</tr>
</tbody>
</table>

## TRIBOLOGICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Static Load Capacity</td>
<td>N/mm^2</td>
<td>140</td>
</tr>
<tr>
<td>Maximum Dynamic Load Capacity</td>
<td>N/mm^2</td>
<td>70</td>
</tr>
<tr>
<td>Maximum sliding speed, U</td>
<td>m/s</td>
<td>0.5</td>
</tr>
<tr>
<td>Maximum pU factor</td>
<td>N/mm^2 x m/s</td>
<td>1.0</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C</td>
<td>-50</td>
</tr>
<tr>
<td>Coefficient of friction, f (dry)</td>
<td></td>
<td>0.05 - 0.18</td>
</tr>
</tbody>
</table>

## RECOMMENDATION TO ASSEMBLY AND TOLERANCES

<table>
<thead>
<tr>
<th>Property</th>
<th>Tolerance</th>
<th>Roughness (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø Housing</td>
<td>H7</td>
<td>3.2</td>
</tr>
<tr>
<td>Ø OD Bearing</td>
<td>s6</td>
<td>3.2</td>
</tr>
<tr>
<td>Ø ID Bearing</td>
<td>before assembly</td>
<td>E8</td>
</tr>
<tr>
<td></td>
<td>after assembly</td>
<td>H10</td>
</tr>
<tr>
<td>Ø Shaft</td>
<td>d8</td>
<td>0.2 - 0.8</td>
</tr>
<tr>
<td>Concentricity Inner/Outer Bearing</td>
<td>IT9</td>
<td></td>
</tr>
</tbody>
</table>

For bearing bores > 200mm, tolerances should be calculated by our application engineering team based on the parameters of each application. Your specific application may require special fitting instructions.

## MICROSECTION

- **1:** Sliding surface with running-in-film
- **2:** Solid lubricant inserts graphite
- **3:** Base material (bronze)
- **4:** Sliding layer with running-in-film
- **5:** Solid lubricant inserts PTFE
- **6:** Base material (bronze)