Should you require a custom coupling to meet a specific requirement, our experienced team of engineers will work alongside you to create a bespoke offering to meet your needs.

Our team are supported by substantial facilities to enable ongoing testing and development, which includes the capability for:

- Measurement of torsional stiffness up to 220 kN.m
- Full scale axial and radial stiffness measurement
- Misalignment testing of couplings up to 2m diameter
- Static and dynamic balancing
- 3D stp and AutoCAD files
- Finite element analysis of both metal and rubber components
- Torsional vibration calculations
- Transient analysis

For your local Renold sales and service location visit www.renold.com
**RBI shaft to shaft**

### Features

Can accommodate a wide range of shaft diameters

Easy disconnection of the outer member and driving flange

Coupling available with limited end float

### Benefits

Allows the optimum coupling to be selected

Allows the driving and driven machines to be disconnected

Provides axial location for armatures with axial float

### Dimensions, Weight and Alignment

<table>
<thead>
<tr>
<th>Coupling Size</th>
<th>RBI 1.4</th>
<th>RBI 2.1</th>
<th>RBI 2.6</th>
<th>RBI 4</th>
<th>RBI 8</th>
<th>RBI 12</th>
<th>RBI 23</th>
<th>RBI 40</th>
<th>RBI 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>INERTIA (kgm²)</td>
<td>J1 0.0044</td>
<td>0.0084</td>
<td>0.0131</td>
<td>0.0233</td>
<td>0.0563</td>
<td>0.1399</td>
<td>0.3227</td>
<td>0.8489</td>
<td>1.9633</td>
</tr>
<tr>
<td></td>
<td>J2 0.0232</td>
<td>0.0375</td>
<td>0.0564</td>
<td>0.0887</td>
<td>0.20</td>
<td>0.3674</td>
<td>1.1035</td>
<td>1.9161</td>
<td>3.4391</td>
</tr>
<tr>
<td></td>
<td>J3 0.0153</td>
<td>0.027</td>
<td>0.0396</td>
<td>0.0644</td>
<td>0.1475</td>
<td>0.2862</td>
<td>0.7998</td>
<td>1.512</td>
<td>2.9796</td>
</tr>
</tbody>
</table>

#### Dimensions (mm)

<table>
<thead>
<tr>
<th>Coupling Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>D1</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBI 1.4</td>
<td>200.0</td>
<td>222.2</td>
<td>238.1</td>
<td>260.3</td>
<td>308.0</td>
<td>358.8</td>
<td>466.7</td>
<td>508.0</td>
<td>571.5</td>
</tr>
<tr>
<td>RBI 2.1</td>
<td>104.8</td>
<td>111.2</td>
<td>123.8</td>
<td>136.5</td>
<td>174.6</td>
<td>193.7</td>
<td>233.4</td>
<td>260.4</td>
<td>285.8</td>
</tr>
<tr>
<td>RBI 2.6</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>4.8</td>
<td>6.4</td>
<td>6.4</td>
</tr>
<tr>
<td>RBI 4</td>
<td>50.8</td>
<td>54.0</td>
<td>60.3</td>
<td>66.7</td>
<td>85.7</td>
<td>95.2</td>
<td>114.3</td>
<td>127.0</td>
<td>139.7</td>
</tr>
<tr>
<td>RBI 8</td>
<td>79.4</td>
<td>95.2</td>
<td>101.6</td>
<td>120.6</td>
<td>152.4</td>
<td>184.1</td>
<td>222.2</td>
<td>279.4</td>
<td>330.2</td>
</tr>
<tr>
<td>RBI 12</td>
<td>177.8</td>
<td>200.0</td>
<td>212.7</td>
<td>235.0</td>
<td>279.4</td>
<td>323.8</td>
<td>438.15</td>
<td>469.9</td>
<td>542.92</td>
</tr>
<tr>
<td>RBI 23</td>
<td>156.5</td>
<td>178</td>
<td>186.5</td>
<td>210</td>
<td>251</td>
<td>295</td>
<td>362</td>
<td>435</td>
<td>501.5</td>
</tr>
<tr>
<td>RBI 40</td>
<td>12.7</td>
<td>14.3</td>
<td>15.9</td>
<td>17.5</td>
<td>19.0</td>
<td>19.0</td>
<td>19.0</td>
<td>22.2</td>
<td>25.4</td>
</tr>
<tr>
<td>RBI 60</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>M8</td>
<td>M8</td>
<td>M8</td>
<td>M10</td>
<td>M10</td>
<td>M10</td>
<td>M12</td>
<td>M12</td>
<td>M12</td>
<td>M12</td>
</tr>
<tr>
<td>M10</td>
<td>M10</td>
<td>M10</td>
<td>M10</td>
<td>M12</td>
<td>M12</td>
<td>M12</td>
<td>M16</td>
<td>M16</td>
<td>16</td>
</tr>
<tr>
<td>50</td>
<td>60</td>
<td>65</td>
<td>80</td>
<td>95</td>
<td>115</td>
<td>140</td>
<td>170</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>70</td>
<td>75</td>
<td>85</td>
<td>95</td>
<td>115</td>
<td>140</td>
<td>170</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>35</td>
<td>40</td>
<td>40</td>
<td>55</td>
<td>55</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Per Cavity 1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Per Coupling 10</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>5250</td>
<td>4725</td>
<td>4410</td>
<td>4035</td>
<td>3410</td>
<td>2925</td>
<td>2250</td>
<td>2070</td>
<td>1820</td>
<td></td>
</tr>
<tr>
<td>2.82</td>
<td>4.04</td>
<td>5.29</td>
<td>7.49</td>
<td>12.82</td>
<td>23.39</td>
<td>35.88</td>
<td>62.81</td>
<td>102.09</td>
<td></td>
</tr>
<tr>
<td>4.00</td>
<td>5.05</td>
<td>6.38</td>
<td>8.14</td>
<td>13.29</td>
<td>18.41</td>
<td>33.98</td>
<td>43.87</td>
<td>59.00</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>4.06</td>
<td>5.82</td>
<td>7.42</td>
<td>10.44</td>
<td>18.03</td>
<td>27.37</td>
<td>47.43</td>
<td>75.39</td>
<td>113.32</td>
</tr>
</tbody>
</table>

### Allowable Misalignment

<table>
<thead>
<tr>
<th>Coupling Size</th>
<th>Radial (mm)</th>
<th>Axial (mm)</th>
<th>Angular (degree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBI 1.4</td>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>RBI 2.1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>RBI 2.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
</tbody>
</table>

1For operation above 80% of the declared maximum coupling speed, it is recommended that the coupling is dynamically balanced.

2Weights and inertias are based on the minimum bore size.

3Installations should be initially aligned as accurately as possible. In order to allow for deterioration in alignment over time it is recommended that initial alignment should not exceed 25% of the above noted data. The forces on the driving and driven machinery should be calculated to ensure that they do not exceed the manufacturers allowances.

---

### BESPOKE SERVICES

The RBI Coupling can be adapted to meet customer requirements, as can be seen from some of the design variations shown alongside. For a more comprehensive list, contact Renold Couplings.
General purpose, cost effective range, which is manufactured in SG iron for torques up to 60kN.m.

**Spacer Coupling**
Used to increase distance between shaft ends and allow easy access to driven and driving machines.

**Cardan Shaft Coupling**
Used to increase the distance between shaft ends and give a higher misalignment capability.

**The Standard Range Comprises**
- Shaft to shaft
- Shaft to shaft with increased shaft engagement

**Applications**
- Rubber processing and plastics industry
- Fluid transmission industry
- Material Handling
- Cranes & Hoists
- Metal manufacture
- Bulk handling
- Pulp and paper industry
- General purpose industrial applications

**Benefits**
- Ensuring continuous operation of the driveline in the unlikely event of rubber damage
- Achieving low vibratory loads in the driveline components by selection of optimum stiffness characteristics
- With no lubrication or adjustment required resulting in low lifetime costs
- Avoiding failure of the driveline under short circuit and other transient conditions
- Allows axial and radial misalignment between the driving and driven machines
- Eliminating torque amplifications through pre-compression of the rubber elements

**Features**
- Intrinsically fail safe
- Control of resonant torsional vibration
- Maintenance free
- Severe shock load protection
- Misalignment capability
- Zero backlash
- Low cost

**Construction Details**
- Spheroidal graphite to BS EN 1563:2011 Grade 400-15
- Separate rubber elements with a standard SM80 shore hardness
- Rubber elements which are totally enclosed and loaded in compression
**RBI shaft to shaft**

With *increased shaft engagement* (Optional)

**Features**

Long Boss Inner Member

**Benefits**

- Allows small diameter long length shafts to be used
- Reduces key stress
- Allows increased distances between shaft ends
- Full shaft engagement avoids the need for spacer collars

### Coupling with long boss inner member

Coupling with long boss inner member and large boss driving flange to increase shaft engagement and to accept larger shafts.

### Brake Drum Coupling

Coupling with brake drum for use on cranes, fans and conveyor drives, (brake disk couplings are available).
RBI custom engineering

Should you require a custom coupling to meet a specific requirement, our experienced team of engineers will work alongside you to create a bespoke offering to meet your needs.

Our team are supported by substantial facilities to enable ongoing testing and development, which includes the capability for:

- Measurement of torsional stiffness up to 220 kN.m
- Full scale axial and radial stiffness measurement
- Misalignment testing of couplings up to 2m diameter
- Static and dynamic balancing
- 3D stp and AutoCAD files
- Finite element analysis of both metal and rubber components
- Torsional vibration calculations
- Transient analysis
A global power transmission group serving global markets through an international network.
For your local Renold sales and service location
visit [www.renold.com](http://www.renold.com)