Hirth coupling is a form-locking, self-centering and easily detachable connection component. Hirth couplings connect shafts, disks, rotors, wheels and cranks made of metal or plastic – with remarkable precision and maximum torque capacity.

Our product portfolio includes:
- Machining of teeth on customer components
- Manufacture of customer specific Hirth rings
- Supply of standard Hirth rings
- Engineering services in calculation, design and quality control

Torque up to 15,000 kNm can be transmitted wear-free, with comparably small diameter. Positional accuracy of 1–2 angle seconds is achievable.
Hirth Couplings on customers’ components
We manufacture the Voith Hirth coupling onto your components – up to a diameter of 1,600 mm and with lead times of just a few working days. We can also offer you key engineering services during the design of your components. We can provide you with consultation during the design stage and perform the calculations needed for your Hirth coupling. If you wish, we can also take charge of quality assurance tasks for you.

Technical data:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque</td>
<td>up to 15,000 kNm</td>
</tr>
<tr>
<td>Component diameter</td>
<td>up to 1,600 mm</td>
</tr>
<tr>
<td>Component weight</td>
<td>up to 4,500 kg</td>
</tr>
<tr>
<td>Component length</td>
<td>up to 4,500 mm</td>
</tr>
<tr>
<td>Number of gear teeth</td>
<td>max. 720</td>
</tr>
<tr>
<td>Indexing accuracy</td>
<td>1 – 2 angle seconds</td>
</tr>
<tr>
<td>Repeat accuracy</td>
<td>&lt; 0.001 mm</td>
</tr>
<tr>
<td>Radial and axial run-out</td>
<td>&lt; 0.01 mm</td>
</tr>
<tr>
<td>Centering</td>
<td>self-centering</td>
</tr>
</tbody>
</table>

Hirth rings
We manufacture both customer-specific Hirth rings and standard Hirth rings. The preferred sizes of the standard rings are always available from stock. We manufacture customer-specific Hirth rings up to a diameter of 1,600 mm with up to 720 gear teeth. Standard rings are available with diameters of 50 to 900 mm and with between 12 and 720 gear teeth.

Typical applications for Hirth couplings
- Shafts, wheels and rotors in gear units, pumps, fans, compressors and turbines
- Rotary indexing tables, turret heads and disk turrets in machine tools
- Connections in gas and steam turbines
- Flanged connections on shafts
- Connections in metrology, robot technology and medical technology
- Connections in aerospace technology
- Crank shafts
- Substitution of complex, single-piece forged parts

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