Precision brass rod
W5006
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W5006 the brass rod for highest demand

Our W5006 bars are the premium product for your high-performance machining. The closer the starting material is to the end product, the more efficient the subsequent machining. The Wieland precision hexagonal bar W5006 meets these expectations in a special way: It precisely reproduces the outer contour of a workpiece. In contrast to polygonal cross-sections produced by machining, drawn hexagonal bars are characterized by very smooth, even and compacted surfaces. They also give the workpiece an uninterrupted notch-insensitive microstructure. Significant material savings are another plus.

The rod ends are suitable for automatic machines and allow smooth feeding and unmanned operation. Our bars up to 60 mm are supplied in drawn condition and enable trouble-free machining due to their high precision and constant properties.

Geometry

- Our rods with width across flats 10-30 mm have with max. 1 mm/m a much better straightness than required by DIN EN 12164
- Fix bar lengths, no deviation within one batch
- Width across flats hardly differs to each other
- High consistency of the width across flats within the bar/ bundle/packaging unit
- Reduced width across flats variance within a batch
- Confirmed twist tolerance only half EN 12164

<table>
<thead>
<tr>
<th>Size range</th>
<th>Width across flats in mm</th>
<th>Twist (mm/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wieland</td>
<td>EN 12164</td>
<td></td>
</tr>
<tr>
<td>10 to 18</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>&gt; 18 to 30</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>&gt; 30 to 60</td>
<td>1.5</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Technical delivery conditions

- Rod end finish suitable for automated bar feeding
- Blank, drawn surface
- All bars are eddy current tested
- Supplier identification on rod face from diameter 13 mm upwards

Quality features that speak for themselves

- Chemical composition, specially optimized to polygon bars
- Constant properties due to narrow alloy tolerances
- Good machinability due to fine and uniform lead distribution
- Long tool life due to optimized alloy composition and grain distribution
- On request thermally stress relieved with verification according to ISO 6957
- Sharp-edged as standard according to EN 12164

<table>
<thead>
<tr>
<th>Material designation</th>
<th>Composition in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wieland</td>
<td>EN</td>
</tr>
<tr>
<td>Z33</td>
<td>UNS Cu Zn Pb</td>
</tr>
<tr>
<td>CW614N</td>
<td>C38500 58.5 Rest</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>
Packaging

Size range 2 to 5 mm
The rods are tied in small bundles of around 25 kg with string, wrapped in recyclable PE-foil and packed in wooden boxes:
Net weight approx. 250 kg.

Size range > 5.5 to 7.5 mm
The rods are tied in small bundles of around 25 kg with string, wrapped in recyclable PE-foil and packed in wooden boxes:
Net weight approx. 500 kg.

Size range 8 mm to 10 mm
The rods are packed loose in wooden boxes:
Net weight approx. 500 kg.

Size range > 10 mm
The bars are preferably supplied in bundles of approx. 1,000 kg, alternatively bundles up to approx. 500 kg are possible. The bundles are tied several times with steel strip and secured against slipping with a burlap bag. These specifications apply to our standard packaging. Special packaging is possible on request.

Mechanical Properties

We guarantee constant strength values for reliable finished products.

<table>
<thead>
<tr>
<th>Mechanical properties</th>
<th>R430 (halfhard)</th>
<th>R500 (hard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width across flats (mm)</td>
<td>&gt;10−35</td>
<td>4−10</td>
</tr>
<tr>
<td>Tensile strength Rm (MPa)</td>
<td>min. 430</td>
<td>min. 500</td>
</tr>
<tr>
<td>Yield strength Re 0.2 (MPa)</td>
<td>min. 220</td>
<td>min. 350</td>
</tr>
<tr>
<td>Elongation (%)</td>
<td>to EN 12164</td>
<td></td>
</tr>
</tbody>
</table>

Temper “M” according to EN 12164 applies to rods with width across flats from 36 mm.
From width across flats 46mm additionally thermally stress relieved.

Lead distribution

A decisive influence on the formation of the needle chip is a balanced ratio of alpha and beta microstructure with evenly distributed lead. In addition to a short breaking chip, the lead is also responsible for low tool wear and low cutting forces.

Work efficiently and cost-effectively thanks to our consistent quality

A calculation that pays off. Make use of the advantages of our consistently high quality for a stable manufacturing process!

For further dimensions and products please have a look in our stock brochure.