MicroKom® hi.flex
FINISH BORING SYSTEM
KOMET Group extended its MicroKom® micro adjustable boring product line with the new M05 hi.flex system. The unique finish boring system is specially designed for high flexibility and covers the diameter ranges from 0.236” to 4.921” with just one adjustable boring head. The availability of various boring bars and the new intelligent adapter design contribute to this wide diameter range.

The adjustable head offers an adjustment accuracy of 0.0004” per graduation on an easy-to-read scale and 0.00008” from a vernier with a total adjustment path of up to 0.197”. The system is balanced in zero position and provides an internal coolant supply directly on to the cutting edge throughout the entire cutting diameter range. The standard set includes four boring bars for diameters 0.236” to 0.984”. According to the individual combination, a serrated body, a bridge and two different holders for inserts provide for cutting diameters up to 4.921”.

The MicroKom® hi.flex is compatible with existing ABS® and cylindrical shank fine boring components. The set can be extended with standard boring tools and UniTurn® products, for which the turning range starts at 0.020”. Variable overhang lengths and a single key for clamping, adjusting and mounting bridges and insert holders illustrate how easy the new system is to operate.
Finish boring kit Ø 0.236” - 4.921”
Order No. M05 00610

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M05 01600</td>
<td>1</td>
<td>Micro-adjustable head</td>
</tr>
<tr>
<td>M05 20600</td>
<td>1</td>
<td>Insert holder Ø 0.984” - 1.732”</td>
</tr>
<tr>
<td>M05 20650</td>
<td>1</td>
<td>Insert holder Ø 1.732” - 4.921”</td>
</tr>
<tr>
<td>M05 80600</td>
<td>1</td>
<td>Bridge</td>
</tr>
<tr>
<td>M05 90600</td>
<td>1</td>
<td>Serrated body</td>
</tr>
<tr>
<td>M05 90500.11</td>
<td>1</td>
<td>Packing piece</td>
</tr>
<tr>
<td>B05 20600</td>
<td>1</td>
<td>Boring bar Ø 0.236” - 0.315”</td>
</tr>
<tr>
<td>B05 20620</td>
<td>1</td>
<td>Boring bar Ø 0.315” - 0.472”</td>
</tr>
<tr>
<td>B05 20660</td>
<td>1</td>
<td>Boring bar Ø 0.472” - 0.709”</td>
</tr>
<tr>
<td>B05 20720</td>
<td>1</td>
<td>Boring bar Ø 0.709” - 0.984”</td>
</tr>
<tr>
<td>A5210150 or A5210350</td>
<td>1</td>
<td>ABS 50 CAT 50 or ABS50 CAT 40 Adapter</td>
</tr>
<tr>
<td>1805010040</td>
<td>1</td>
<td>Allen key SW4</td>
</tr>
<tr>
<td>L05 01110</td>
<td>1</td>
<td>Flag key 5IP</td>
</tr>
<tr>
<td>L05 01120</td>
<td>1</td>
<td>Flag key 6IP</td>
</tr>
<tr>
<td>L05 01240</td>
<td>1</td>
<td>Flag key 8IP</td>
</tr>
<tr>
<td>5501105016</td>
<td>5</td>
<td>Cylindrical screw M5×16</td>
</tr>
<tr>
<td>W57 04140.0260</td>
<td>4</td>
<td>Insert BK60</td>
</tr>
<tr>
<td>W57 14140.0460</td>
<td>4</td>
<td>Insert BK60</td>
</tr>
<tr>
<td>W00 04120.0164</td>
<td>2</td>
<td>Insert BK64</td>
</tr>
</tbody>
</table>
MicroKom™ hi, flex
Variable Options

Only 9 tool components
covering diameters 0.236” – 4.921”

- Micro-adjustable head M05 01600
- Boring bar B05 20600
  - Ø 0.236” - 0.315”
  - Ø 0.315” - 0.472”
  - Ø 0.472” - 0.709”
  - Ø 0.709” - 0.984”
  - Ø 0.984” - 1.457”
  - Ø 1.457” - 1.732”
- Serrated body M05 90600
- B05 20620
- B05 20660
- B05 20720
- Insert holder M05 20600
- Boring bar M05 20650
  - Ø 0.236” - 0.315”
  - Ø 0.315” - 0.472”
  - Ø 0.472” - 0.709”
  - Ø 0.709” - 0.984”
  - Ø 0.984” - 1.457”
  - Ø 1.457” - 1.732”
  - Ø 1.732” - 2.205”
  - Ø 2.205” - 2.480”
  - Ø 2.480” - 3.268”
  - Ø 3.268” - 3.661”
  - Ø 3.543” - 4.724”
- Bridge M05 80600
- Insert holder M05 20650
  - Ø 0.236” - 0.315”
  - Ø 0.315” - 0.472”
  - Ø 0.472” - 0.709”
  - Ø 0.709” - 0.984”
  - Ø 0.984” - 1.457”
  - Ø 1.457” - 1.732”
  - Ø 1.732” - 2.205”
  - Ø 2.205” - 2.480”
  - Ø 2.480” - 3.268”
  - Ø 3.268” - 3.661”
  - Ø 3.543” - 4.724”

Variable Options:
- Micro-adjustable head
- Boring bar
- Serrated body
- Insert holder
- Bridge

Only 9 tool components covering diameters 0.236” – 4.921”
**Micro-adjustable boring head with ABS® connection**

with ABS® and cylindrical tool adapter

The micro-adjustable boring head is balanced in the zero position. Adjustment must be in line with cutting parameters and spindle speed.

**Features:**
- Diameter range 0.020” - 4.921” with existing KOMET standard tools
- Large adjustment range from -0.020 to +0.394” on dia.
- Easy to use
- Adjustment per graduation = Ø 0.0004”
- Adjustment accuracy Ø 0.00008” with vernier
- Easy-to-read scale
- Existing ABS32 tools can be used
- Internal coolant supply over entire range
- ABS32 spindle connection and 0.630” cylindrical shank
- Can be adapted for any machine tool with standard tool adapters
- Head diameter: 2.362”

---

<table>
<thead>
<tr>
<th>Order No.</th>
<th>ABS d</th>
<th>d1</th>
<th>d2</th>
<th>S</th>
<th>L</th>
<th>L1</th>
<th>Replacement Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>M05 01600</td>
<td>50</td>
<td>2.362</td>
<td>1.575</td>
<td>2.70</td>
<td>5505108116 M8x1x16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gripper screw</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5505108008 M8x8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clamping screw</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clamping screw</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clamping screw</td>
</tr>
</tbody>
</table>

Important: See page 10 for more application details and safety notes!
Basic Recommendation

<table>
<thead>
<tr>
<th>D min</th>
<th>Order No.</th>
<th>d</th>
<th>L1</th>
<th>L2</th>
<th>N</th>
<th>f</th>
<th>Insert</th>
<th>W00</th>
<th>W30</th>
<th>W57</th>
<th>for Workpiece Material</th>
<th>Clamping screw</th>
<th>Replacement Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.236</td>
<td>B05 20600</td>
<td>0.630</td>
<td>2.823</td>
<td>1.575</td>
<td>0.872</td>
<td>0.118</td>
<td>0.14</td>
<td>W00</td>
<td>W30</td>
<td>W57</td>
<td>P M K N S H</td>
<td>N00 56011</td>
<td>S/M1.8×2.9-5IP</td>
</tr>
<tr>
<td>0.315</td>
<td>B05 20620</td>
<td>0.630</td>
<td>3.047</td>
<td>1.575</td>
<td>1.102</td>
<td>0.157</td>
<td>0.15</td>
<td>W57</td>
<td>W00</td>
<td>W30</td>
<td>T0GX06T10220-EN-14 BK60</td>
<td>N00 56021</td>
<td>S/M2×3.8-6IP</td>
</tr>
<tr>
<td>0.472</td>
<td>B05 20660</td>
<td>0.630</td>
<td>3.472</td>
<td>1.575</td>
<td>1.654</td>
<td>0.236</td>
<td>0.19</td>
<td>W00</td>
<td>W30</td>
<td>W30</td>
<td>TOGX06T10220-EN-14 BK60</td>
<td>L05 00800</td>
<td>5IP</td>
</tr>
<tr>
<td>0.709</td>
<td>B05 20720</td>
<td>0.630</td>
<td>3.937</td>
<td>1.575</td>
<td>2.362</td>
<td>0.354</td>
<td>0.31</td>
<td>W57</td>
<td>W00</td>
<td>W30</td>
<td>T0GX090204EN-14 BK60</td>
<td>L05 00810</td>
<td>6IP</td>
</tr>
</tbody>
</table>

Delivery:
Boring bar with clamping screw. Please order inserts and accessories separately.
### Cutting Recommendations

**Guideline for finish boring with MicroKom® hi.flex Fine boring system**

<table>
<thead>
<tr>
<th>Material group</th>
<th>Tensile Strength (lb/in²)</th>
<th>Hardness, HR</th>
<th>Material</th>
<th>Material example</th>
<th>Cutting speed $V_{f}, \text{ f/min}$</th>
<th>Maximum Feedrate $f$, in/rev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unalloyed steel</td>
<td>&gt;125000</td>
<td>-</td>
<td>AISI 330</td>
<td>5050</td>
<td>980</td>
<td>0.002</td>
</tr>
<tr>
<td>Low alloy steel</td>
<td>30000 - 125000</td>
<td>-</td>
<td>AISI 9313</td>
<td>5120</td>
<td>820</td>
<td>0.002</td>
</tr>
<tr>
<td>Lead alloy</td>
<td>&lt;30000</td>
<td>-</td>
<td>Antac 56</td>
<td>1213</td>
<td>790</td>
<td>0.001</td>
</tr>
<tr>
<td>High alloy steel</td>
<td>&gt;125000</td>
<td>-</td>
<td>Inconel 690</td>
<td>4140</td>
<td>790</td>
<td>0.001</td>
</tr>
<tr>
<td>Tool steel</td>
<td>-</td>
<td>H13</td>
<td>H13</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>-</td>
<td>304L</td>
<td>304L</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>-</td>
<td>316</td>
<td>316</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Grey cast iron</td>
<td>-</td>
<td>4340</td>
<td>4340</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Alloy grey cast iron</td>
<td>-</td>
<td>A436 Type</td>
<td>A436 Type</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Nodular cast iron</td>
<td>-</td>
<td>60-40-18</td>
<td>60-40-18</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Nodular cast iron</td>
<td>-</td>
<td>80-55-06</td>
<td>80-55-06</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Nodular cast iron</td>
<td>-</td>
<td>100-70-3</td>
<td>100-70-3</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Alloymed nodular cast iron</td>
<td>-</td>
<td>A4302</td>
<td>A4302</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Copper alloy iron</td>
<td>-</td>
<td>UNS C36</td>
<td>UNS C36</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Copper alloy iron</td>
<td>-</td>
<td>UNS C36</td>
<td>UNS C36</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Wrought aluminum alloy</td>
<td>-</td>
<td>6061O</td>
<td>6061O</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Aluminum alloy</td>
<td>-</td>
<td>6061O</td>
<td>6061O</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Aluminum alloy</td>
<td>-</td>
<td>3003-T6</td>
<td>3003-T6</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Hardened steel</td>
<td>-</td>
<td>HR</td>
<td>HR</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
<tr>
<td>Hardened steel</td>
<td>-</td>
<td>HR</td>
<td>HR</td>
<td>630</td>
<td>660</td>
<td>0.002</td>
</tr>
</tbody>
</table>

---

### Alternative Insert

#### For better chip control

<table>
<thead>
<tr>
<th>Insert</th>
<th>Size</th>
<th>ISO Insert Description</th>
<th>Workpiece Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>.32</td>
<td>W30 04120.3232</td>
<td>TOGX06T102EL-US12 CK32</td>
</tr>
<tr>
<td>D</td>
<td>.39</td>
<td>W30 04120.3977</td>
<td>TOGX06T102EL-US12 CK32</td>
</tr>
</tbody>
</table>

#### For better wear resistance

<table>
<thead>
<tr>
<th>Insert</th>
<th>Size</th>
<th>ISO Insert Description</th>
<th>Workpiece Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>.315</td>
<td>TOGX090202EL-US12 CK32</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.003</td>
<td>TOGX090202EL-US12 CK32</td>
<td></td>
</tr>
</tbody>
</table>

#### For better surface finish

<table>
<thead>
<tr>
<th>Insert</th>
<th>Size</th>
<th>ISO Insert Description</th>
<th>Workpiece Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>.236</td>
<td>TOGX06T102EN-14 CK32</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.315</td>
<td>TOGX06T102EN-14 CK32</td>
<td></td>
</tr>
</tbody>
</table>

---

Please see page 10 for more application details and safety notes!
**MicroKom® hi.flex**

**Basic body / Insert holder Ø 0.984” – 3.661”**

<table>
<thead>
<tr>
<th>L / D</th>
<th>Through hole</th>
<th>Blind hole</th>
<th>Slanted Surface</th>
<th>Cross Hole</th>
<th>Boring Backwards</th>
<th>HRC &gt; 54</th>
<th>Through Hole</th>
<th>HRC &gt; 54</th>
<th>Blind Hole</th>
<th>Vibration Dampening</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2.5xD</td>
<td>●</td>
<td>●</td>
<td>◯</td>
<td>●</td>
<td>◯</td>
<td>H</td>
<td>●</td>
<td>H</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

- Highly recommended   - Recommended   - May be suitable   - Not recommended

**∅ 0.984” – 2.480”**

![Diagram of Basic body](image)

**∅ 2.480” – 3.661”**

![Diagram of Packing piece](image)

**Basic body**

<table>
<thead>
<tr>
<th>Order No.</th>
<th>d</th>
<th>d1</th>
<th>N</th>
<th>L</th>
<th>L1</th>
<th>Order No. Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M05 90600</td>
<td>0.630</td>
<td>0.748</td>
<td>2.559</td>
<td>3.484</td>
<td>2.028</td>
<td>0.36</td>
</tr>
</tbody>
</table>

**Delivery:** Serrated body complete with location screw and cup spring.

<table>
<thead>
<tr>
<th>Insert Holder</th>
<th>Basic Recommendation</th>
<th>Replacement Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Insert Order No. Size</td>
<td>ISO Insert Description</td>
</tr>
<tr>
<td></td>
<td>Clamping screw Order No. Description</td>
<td>TORX PLUS Order No. Description</td>
</tr>
</tbody>
</table>

**Delivery:** Insert holder complete with clamping screw.

Please order inserts and Torx Plus screw driver separately.
### Cutting Recommendations

**Guideline for finish boring with MicroKom® hi.flex Fine boring system**

<table>
<thead>
<tr>
<th>Material group</th>
<th>Tensile Strength (Btu/in²)</th>
<th>Hardness HB</th>
<th>Material</th>
<th>AISI / SAE</th>
<th>Cutting speed Vc, ft/min</th>
<th>Maximum Feedrate f, in/rev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material example</td>
<td>A570.36 1213 3724</td>
<td>980</td>
<td>0.004 - 1.732</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low alloy steel</td>
<td>S120 1055 5115</td>
<td>820</td>
<td>0.003 - 0.005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead alloy</td>
<td>1213</td>
<td>790</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High alloy steel heat resistant</td>
<td>4140 1064</td>
<td>790</td>
<td>0.004 - 0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tool steel</td>
<td>H13 H21</td>
<td>660</td>
<td>0.002 - 0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special alloy: Inconel, hastelloy, nimonit, etc.</td>
<td>Inconel® 718 Nimonit® RBA</td>
<td>660</td>
<td>0.002 - 0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium, titanium alloy</td>
<td>AMS 5520</td>
<td>660</td>
<td>0.002 - 0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel austenitic</td>
<td>304L 316</td>
<td>660</td>
<td>0.003 - 0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel martensitic</td>
<td>630</td>
<td>590</td>
<td>0.003 - 0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel martensitic/perlitic</td>
<td>420 403</td>
<td>390</td>
<td>0.002 - 0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grey cast iron</td>
<td>No 35 8 No 50 8</td>
<td>790</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alloy grey cast iron</td>
<td>A436 Type 2</td>
<td>690</td>
<td>0.004 - 0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nodular cast iron ferrite</td>
<td>590</td>
<td>660</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nodular cast iron ferrite/perlitic</td>
<td>80-55-66</td>
<td>590</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nodular cast iron pearlitic</td>
<td>100-70-03 7003</td>
<td>520</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alloys nodular cast iron</td>
<td>A41302</td>
<td>460</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vermicular cast iron</td>
<td>UNS C36000</td>
<td>460</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper alloy, brass, lead alloy, bronze, lead bronze: good cut</td>
<td>UNS C36000</td>
<td>460</td>
<td>0.006 - 0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper alloy, brass, bronze: average cut</td>
<td>GO-A0012</td>
<td>890</td>
<td>0.004 - 0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wrought aluminum alloy</td>
<td>GO-A0012</td>
<td>1150</td>
<td>0.003 - 0.005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum alloy: Si content &gt;10%</td>
<td>A360.2</td>
<td>820</td>
<td>0.002 - 0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum alloy: Si content &gt;10%</td>
<td>A360.2</td>
<td>820</td>
<td>0.002 - 0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardened steel &lt; 45 HRC</td>
<td>A360.2</td>
<td>820</td>
<td>0.002 - 0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardened steel &gt; 45 HRC</td>
<td>A360.2</td>
<td>820</td>
<td>0.002 - 0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alternative Insert

#### For better chip control

<table>
<thead>
<tr>
<th>Insert</th>
<th>Order No.</th>
<th>ISO Insert Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W30</td>
<td>04120.3232</td>
<td>TOHX06T102EL-US12 CK32</td>
</tr>
<tr>
<td>W30</td>
<td>04120.3060</td>
<td>TOHX06T100EL-G12 BK60</td>
</tr>
<tr>
<td>W57</td>
<td>04120.0223</td>
<td>TOGX06T102FN-12 K10</td>
</tr>
</tbody>
</table>

#### For better wear resistance

<table>
<thead>
<tr>
<th>Insert</th>
<th>Order No.</th>
<th>ISO Insert Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W57</td>
<td>04140.0232</td>
<td>TOGX06T102EN-14 CK32</td>
</tr>
<tr>
<td>W30</td>
<td>04990.0355</td>
<td>TOGX06T103FN PCD55</td>
</tr>
<tr>
<td>W30</td>
<td>04990.0355</td>
<td>TOGX06T103TN CBN57</td>
</tr>
</tbody>
</table>

#### For better surface finish

<table>
<thead>
<tr>
<th>Insert</th>
<th>Order No.</th>
<th>ISO Insert Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W30</td>
<td>04120.3160</td>
<td>TOHX06T102EL-U12 BK60</td>
</tr>
<tr>
<td>W30</td>
<td>04990.0355</td>
<td>TOGX06T103FN PCD55</td>
</tr>
<tr>
<td>W30</td>
<td>04990.0355</td>
<td>TOGX06T103TN CBN57</td>
</tr>
<tr>
<td>W30</td>
<td>04990.0240</td>
<td>TOGX06T103TN CB1N40</td>
</tr>
</tbody>
</table>

Please see page 10 for more application details and safety notes!
**MicroKom hi.flex**

**Bridge / Insert holder Ø 3.543” – 4.921”**

<table>
<thead>
<tr>
<th>Through hole</th>
<th>Blind hole</th>
<th>Slanted Surface</th>
<th>Cross Hole</th>
<th>Boring Backwards</th>
<th>HRC &gt; 54 Through Hole</th>
<th>HRC &gt; 54 Blind Hole</th>
<th>Vibration Dampening</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Basic Recommendation**

- Insert: -12 -14 -G06
- Workpiece Material: Clamping screw
- Clamping screw: TORX PLUS

<table>
<thead>
<tr>
<th>Description</th>
<th>Order No.</th>
<th>Size</th>
<th>ISO Insert Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workpiece Material</td>
<td>M05 90500.11</td>
<td>-0.32</td>
<td>5501105016 M5×16 ISO4762</td>
<td>M05 20150</td>
</tr>
<tr>
<td>Through hole</td>
<td>W57 14140.0460</td>
<td>-0.06</td>
<td>TOGX090204EN-14 BK60</td>
<td>TOGX090204FN-12 K10</td>
</tr>
<tr>
<td>Blind hole</td>
<td>W30 14060.0461</td>
<td>-0.046</td>
<td>TOH090204EL-G06 BK61</td>
<td>N00 56111</td>
</tr>
<tr>
<td>Slanted Surface</td>
<td>W57 14120.0423</td>
<td>-0.042</td>
<td>TOGX090204FN-12 K10</td>
<td>L05 00830</td>
</tr>
</tbody>
</table>

**Delivery:**

Bridge with location screw.
Insert holder with clamping screw.

Please order inserts and Torx Plus screw driver separately.

The technical notes provided in the application details depend on the environmental and application conditions (such as machine, environmental temperature, lubrication/coolant used and desired machining results): these are based on proper application conditions, use and compliance with the spindle speed limits given for the tools.
### Cutting Recommendations

**Guideline for finish boring with MicroKom® hi.flex Fine boring system**

<table>
<thead>
<tr>
<th>Workpiece Material</th>
<th>Workpiece Material</th>
<th>Workpiece Material</th>
<th>Workpiece Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material group</td>
<td>Material group</td>
<td>Material group</td>
<td>Material group</td>
</tr>
<tr>
<td>Tensile Strength (lbf/in²)</td>
<td>Tensile Strength (lbf/in²)</td>
<td>Tensile Strength (lbf/in²)</td>
<td>Tensile Strength (lbf/in²)</td>
</tr>
<tr>
<td>Hardness HB</td>
<td>Hardness HB</td>
<td>Hardness HB</td>
<td>Hardness HB</td>
</tr>
<tr>
<td>Material example</td>
<td>Material example</td>
<td>Material example</td>
<td>Material example</td>
</tr>
<tr>
<td>AISI / SAE</td>
<td>AISI / SAE</td>
<td>AISI / SAE</td>
<td>AISI / SAE</td>
</tr>
<tr>
<td>Cutting speed ( v_c ), ft/min</td>
<td>Cutting speed ( v_c ), ft/min</td>
<td>Cutting speed ( v_c ), ft/min</td>
<td>Cutting speed ( v_c ), ft/min</td>
</tr>
<tr>
<td>Maximum Feedrate ( f ), in/rev</td>
<td>Maximum Feedrate ( f ), in/rev</td>
<td>Maximum Feedrate ( f ), in/rev</td>
<td>Maximum Feedrate ( f ), in/rev</td>
</tr>
</tbody>
</table>

**Alternative Insert**

### For better chip control

<table>
<thead>
<tr>
<th>Insert</th>
<th>Insert</th>
<th>Insert</th>
</tr>
</thead>
<tbody>
<tr>
<td>W30</td>
<td>W57</td>
<td>W30</td>
</tr>
<tr>
<td>Order No.</td>
<td>Order No.</td>
<td>Order No.</td>
</tr>
<tr>
<td>TOHX090202E-ULS12 CK32</td>
<td>TOHX090202E-ULS12 CK32</td>
<td>TOGX090204FN-12 K10</td>
</tr>
<tr>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOGX090204FN-12 K10</td>
</tr>
</tbody>
</table>

### For better wear resistance

<table>
<thead>
<tr>
<th>Insert</th>
<th>Insert</th>
<th>Insert</th>
</tr>
</thead>
<tbody>
<tr>
<td>W30</td>
<td>W57</td>
<td>W30</td>
</tr>
<tr>
<td>Order No.</td>
<td>Order No.</td>
<td>Order No.</td>
</tr>
<tr>
<td>TOHX090202E-ULS12 CK32</td>
<td>TOHX090202E-ULS12 CK32</td>
<td>TOGX090204FN-12 K10</td>
</tr>
<tr>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOGX090204FN-12 K10</td>
</tr>
</tbody>
</table>

### For better surface finish

<table>
<thead>
<tr>
<th>Insert</th>
<th>Insert</th>
<th>Insert</th>
</tr>
</thead>
<tbody>
<tr>
<td>W30</td>
<td>W57</td>
<td>W30</td>
</tr>
<tr>
<td>Order No.</td>
<td>Order No.</td>
<td>Order No.</td>
</tr>
<tr>
<td>TOHX090202E-ULS12 BK60</td>
<td>TOHX090202E-ULS12 BK60</td>
<td>TOGX090204FN-12 K10</td>
</tr>
<tr>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOHX090200E-ULS12 BK60</td>
<td>TOGX090204FN-12 K10</td>
</tr>
</tbody>
</table>

Please see page 10 for more application details and safety notes!
**MicroKom™ hi.ﬂex  Optional Equipment**

**Boring Bar Adapter**

**Adapter**
with cylindrical tool location
for clamping vibration dampened fine boring bars

---

**Assembly parts**

<table>
<thead>
<tr>
<th>Order No.</th>
<th>d</th>
<th>d1</th>
<th>d2</th>
<th>L</th>
<th>L1</th>
<th>Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M05 90200</td>
<td>0.236</td>
<td>1.120</td>
<td>–</td>
<td>0.630</td>
<td>–</td>
<td>M8×10</td>
<td>55051 08010</td>
</tr>
<tr>
<td>M05 90210</td>
<td>0.315</td>
<td>1.120</td>
<td>–</td>
<td>0.630</td>
<td>–</td>
<td>M8×10</td>
<td>55051 08010</td>
</tr>
<tr>
<td>M05 90220</td>
<td>0.394</td>
<td>1.220</td>
<td>1.811</td>
<td>0.590</td>
<td>0.984</td>
<td>M8×10</td>
<td>55051 08010</td>
</tr>
<tr>
<td>M05 90230</td>
<td>0.472</td>
<td>1.220</td>
<td>1.811</td>
<td>0.590</td>
<td>0.984</td>
<td>M8×10</td>
<td>55051 08010</td>
</tr>
<tr>
<td>M05 90240</td>
<td>0.630</td>
<td>1.220</td>
<td>1.811</td>
<td>0.787</td>
<td>1.181</td>
<td>M8×8</td>
<td>55051 08008</td>
</tr>
</tbody>
</table>

**Supplies include:** Adapter complete.

**Instruction for adapter M05 90240**

1. Please note:
Before tightening the holding screw (3), center the adapter (4) with shank Ø for the boring bar (2) on the micro-adjustable head.
Mounting bridge
for O.D. machining Ø 0.197” – 2.756”

Setting the diameter

- Position the mounting bridge on the micro-adjustable head.
- Set the coarse position on the upper scale, tighten screw ①.

**Important note:** check position of screw ① for required Ø range!

<table>
<thead>
<tr>
<th>Ø size</th>
<th>Order No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.197” – 1.338”</td>
<td>M05 90300</td>
<td>0.014</td>
</tr>
<tr>
<td>Ø 1.299” – 1.732”</td>
<td>W57 14140.0460</td>
<td>W30 14060.0461</td>
</tr>
<tr>
<td>Ø 1.693” – 2.756”</td>
<td>W57 14120.0423</td>
<td>W30 14060.0461</td>
</tr>
</tbody>
</table>

**Supplies include:** Mounting bridge with assembly parts. Please order inserts and accessories separately.