GLOBAL MASTER DISTRIBUTOR:

Carter Manufacturing Limited
TEL: +44 (0)1865 821 720
EMAIL: sales@carterbearings.co.uk
Unasis Drill Press Cutting Tool

Unasis Portable Proof Load Tool

Unasis Breakaway Torque Tool

Table of Contents

Table of Contents ............................................................. 3
Table of Figures ............................................................... 3
Part List ............................................................................. 4
Tool Component Breakdown ............................................. 5
Bearing Terminology ......................................................... 5
Set-Up Instructions .......................................................... 6
Recommended Tool Spindle Speeds .............................. 7
Operating Instructions ...................................................... 8

Table of Figures

Figure 1 - Drill Press Cutting Tool ................................. 4
Figure 2 - Primary Anvil ................................................... 4
Figure 3 - Tool component breakdown ......................... 5
Figure 4 - Bearing terminology ...................................... 5
Figure 5 - Cutting tool installed in drill press ............... 6
Figure 6 - Cutting tool aligned with workpiece .......... 6
Figure 7 - Recommended tool spindle speeds .......... 7
Figure 8 - Swage groove cut by cutting tool .......... 8
Figure 9 - Unasis Install/Remove Tool ........................ 8
Part List

Figure 1 - Drill Press Cutting Tool

Figure 2 - Primary Anvil
**Tool Component Breakdown**

<table>
<thead>
<tr>
<th>Number</th>
<th>Tool Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cutting Tool</td>
</tr>
<tr>
<td>2</td>
<td>Pilot</td>
</tr>
<tr>
<td>3</td>
<td>Primary Anvil</td>
</tr>
</tbody>
</table>

**Figure 3 - Tool component breakdown**

**Bearing Terminology**

**Figure 4 - Bearing terminology**
Set-Up Instructions

NOTE: DO NOT START SPINDLE DURING SETUP.

• Install cutting tool (1) into the chuck of a drill press or vertical milling machine.

• Set workpiece on primary anvil (3) so the centre pin goes through the bearing bore.

• Bring down cutting tool (1) in order to align workpiece so that the pilot (2) locates within the bearing bore and the cutter teeth touch down on the bearing v-groove.

• Set the spindle stop so it will let the cutting tool only cut 0.025 – 0.035in below the initial contact point.

• Apply cutting oil to the edge of the bearing.

• Adjust spindle to recommended speed.

NOTE: RECOMMENDED SPEED IS 160 RPM DIVIDED BY BEARING OUTSIDE DIAMETER (IN) OR AS SPECIFIED BY MANUFACTURED.

\[ v = \frac{160}{D} \]

\[ v = \text{Recommended Tool Spindle Speed (rpm)} \]
\[ D = \text{Outside Diameter (in)} \]
### RECOMMENDED TOOL SPINDLE SPEEDS

<table>
<thead>
<tr>
<th>Unasis Tool</th>
<th>Bearing Number</th>
<th>Outside Diameter (in)</th>
<th>Spindle Speed (rpm)</th>
<th>Unasis Tool</th>
<th>Bearing Number</th>
<th>Outside Diameter (in)</th>
<th>Spindle Speed (rpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDCT4101-3</td>
<td>MS14101-3</td>
<td>0.5625</td>
<td>284</td>
<td>IDCT4103-3</td>
<td>MS14103-3</td>
<td>0.6520</td>
<td>245</td>
</tr>
<tr>
<td>IDCT4101-4</td>
<td>MS14101-4</td>
<td>0.6562</td>
<td>244</td>
<td>IDCT4103-4</td>
<td>MS14103-4</td>
<td>0.6250</td>
<td>256</td>
</tr>
<tr>
<td>IDCT4101-5</td>
<td>MS14101-5</td>
<td>0.7500</td>
<td>213</td>
<td>IDCT4103-5</td>
<td>MS14103-5</td>
<td>0.6875</td>
<td>233</td>
</tr>
<tr>
<td>IDCT4101-5A</td>
<td>MS14101-5A</td>
<td>0.7500</td>
<td>213</td>
<td>IDCT4103-6</td>
<td>MS14103-6</td>
<td>0.8125</td>
<td>197</td>
</tr>
<tr>
<td>IDCT4101-6</td>
<td>MS14101-6</td>
<td>0.8125</td>
<td>197</td>
<td>IDCT4103-7A</td>
<td>MS14103-7A</td>
<td>0.9062</td>
<td>177</td>
</tr>
<tr>
<td>IDCT4101-7</td>
<td>MS14101-7</td>
<td>0.9062</td>
<td>177</td>
<td>IDCT4103-7</td>
<td>MS14103-7</td>
<td>0.9375</td>
<td>171</td>
</tr>
<tr>
<td>IDCT4101-8</td>
<td>MS14101-8</td>
<td>1.0000</td>
<td>160</td>
<td>IDCT4103-8</td>
<td>MS14103-8</td>
<td>1.0000</td>
<td>160</td>
</tr>
<tr>
<td>IDCT4101-9</td>
<td>MS14101-9</td>
<td>1.0937</td>
<td>146</td>
<td>IDCT4103-9</td>
<td>MS14103-9</td>
<td>1.1250</td>
<td>142</td>
</tr>
<tr>
<td>IDCT4101-10</td>
<td>MS14101-10</td>
<td>1.1875</td>
<td>135</td>
<td>IDCT4103-10</td>
<td>MS14103-10</td>
<td>1.1875</td>
<td>135</td>
</tr>
<tr>
<td>IDCT4101-12</td>
<td>MS14101-12</td>
<td>1.4375</td>
<td>111</td>
<td>IDCT4103-12</td>
<td>MS14103-12</td>
<td>1.3750</td>
<td>116</td>
</tr>
<tr>
<td>IDCT4101-14</td>
<td>MS14101-14</td>
<td>1.5625</td>
<td>102</td>
<td>IDCT4103-14</td>
<td>MS14103-14</td>
<td>1.6250</td>
<td>98</td>
</tr>
<tr>
<td>IDCT4101-16</td>
<td>MS14101-16</td>
<td>1.7500</td>
<td>284</td>
<td>IDCT4103-16</td>
<td>MS14103-16</td>
<td>2.1250</td>
<td>75</td>
</tr>
</tbody>
</table>

*Figure 7 - Recommended tool spindle speeds*
Operating Instructions

- Start spindle and apply gentle pressure at first so the teeth start cutting the v-groove.

**NOTE:** GENTLE PRESSURE IS DEFINED BY TWO FINGERS ON FEED LEVER.

- Continue to increase pressure and alternate between cut and lift to allow metal shavings and heat to disperse.

**NOTE:** FREQUENTLY CHECK THE CUT DEPTH TO ENSURE MINIMUM TOOL WEAR.

**CAUTION:** DO NOT TRY TO FORCE THE SPINDLE OR PUSH PAST THE CONTACT STOP.

- Once the cut is complete, release pressure and withdraw tool from chuck.

The bearing is now ready to be safely removed using a Unasis install/remove tool.
This catalogue has been produced with a great amount of care and attention; all data has been checked for its accuracy. However, no liability can be assumed for any incorrect or incomplete data.

Due to the constant development and expansion of the product range, we reserve the right to make modifications without prior notice.

All rights reserved. Reproduction in whole or in part without authorisation is prohibited.