NEXT GENERATION SKWEZLOC®
CONCENTRIC LOCKING FOR
IMPROVED LOCK RELIABILITY

DESIGNED FOR COMMERCIAL
(TURNED & POLISHED) SHAFTING

REGAL®
Improved Lock Reliability on Turned Ground & Polished (TG&P) Shafting

Designed for Commercial (Turned & Polished) Shafting

Same Simple Single Screw Installation
Originally designed and patented in 1966, Sealmaster® SKWEZLOC® concentric lock has become synonymous with concentric locking and has been redesigned* to accommodate “Commercial” grade Turned & Polished (T&P) shaft tolerances with improved lock reliability on Turned Ground & Polished (TG&P) shaft tolerances.

SKWEZLOC concentric locking collar clamp design results in near perfect concentricity of the shaft to bearing bore and maintains near perfect ball path roundness, while reducing fretting corrosion. This design eliminates the shaft damage of setscrew locking, and minimizes bearing induced vibration for smoother quieter operation. The collar has a TORX® Plus head cap screw that outlasts stripping 12 times longer than hex head cap screws.

**NEW DESIGN FEATURES**

- Innovative circumferential groove on the inner ring bore that improves shaft grip and reduces raceway distortion for quieter smoother operation allowing for improved lock reliability.
- Larger cap screw and collar for improved clamping force to the shaft.
- Designed for use on “Commercial” T&P shafting**, potential user cost reduction on shafting by specifying “Commercial” tolerances.
- Same simple single screw installation, no axial movement during installation or risk of preloading the bearing which are concerns when using an adapter lock design.
- Patent Pending Design.

<table>
<thead>
<tr>
<th>SHAFT DIAMETER</th>
<th>OLD TOLERANCE RANGE TURNED, GROUND &amp; POLISHED (TG&amp;P)</th>
<th>NEW TOLERANCE RANGE** COMMERCIAL SHAFTING / TURNED &amp; POLISHED (T&amp;P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” to 2”</td>
<td>+.0000 / -.0005”</td>
<td>+.000 / -.003”</td>
</tr>
<tr>
<td>2 1/8” to 2 7/16”</td>
<td>+.0000 / -.0010”</td>
<td>+.000 / -.004”</td>
</tr>
</tbody>
</table>

Notes:

* No change to part numbers, this will be a rolling implementation.
** Maximum speed rating on Commercial (T&P) shafting equal to setscrew locking, consult bearing catalog.
CIRCUMFERENTIAL GROOVE increases inner ring elasticity to improve grip (clamping force) on “undersized” commercial shafting without increasing deformation to inner ring ball path.

LARGER COLLAR & SCREW increase grip and holding power.

OPTIMIZED CHAMFER PROFILE reduces stress concentrations when collar is tightened.

FEA Modeling of Installed Inner Ring

Note: all values exceed axial load capacity of the bearing

*In laboratory axial push off testing for 1 7/16” the next generation design resulted in:
85% holding force improvement on Turned, Ground & Polish Shafting vs old design
59% holding force improvement on Turned, Ground & Polish Shafting vs leading competitor
113% holding force improvement on Turned & Polish Shafting vs leading competitor
**CONCENTRIC LOCKING**

**NEW DESIGN TORQUE RATINGS**

<table>
<thead>
<tr>
<th>SCREW SIZE</th>
<th>TORX PLUS SIZE</th>
<th>TORX SIZE</th>
<th>NEW DESIGN TORQUE in-lbs</th>
<th>OLD DESIGN TORQUE in-lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8-32</td>
<td>25P</td>
<td>T-25</td>
<td>n/a</td>
<td>70</td>
</tr>
<tr>
<td>#10-24</td>
<td>27P</td>
<td>T-27</td>
<td>85</td>
<td>100</td>
</tr>
<tr>
<td>1/4-20</td>
<td>30P</td>
<td>T-30</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>5/16-18</td>
<td>45P</td>
<td>T-45</td>
<td>350</td>
<td>495</td>
</tr>
<tr>
<td>3/8-16</td>
<td>50P</td>
<td>T-50</td>
<td>650</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Notes:**
1. A notice of torque specification change will be included with the product for a short period of time.
2. Utilization of old torque specs will have no impact to performance on TG&P shafting.

**SHAFT COST SAVING CALCULATION**

For original equipment manufacturers and end users using turned, ground & polished shafts a 25%-35% cost savings on shafting might be possible if the shafting specification is changed to commercial turned & polished per listed tolerances.

Note: Additional review may be required to verify potential impact to other components attached to shaft. Shaft cost estimates based on 1” diameter shaft.

**COST SAVING EXAMPLE**

\[
\text{Cost TG&P Shafting: } \$ \text{______} - \text{Cost of T&P Shafting: } - \$ \text{______} = \$ \text{______} \\
\times \text{ Total Number of Shafts: } \times \text{______} \times \text{ Total Number of Shafts: } \times \text{______} = \$ \text{______}
\]

**TOTAL COST SAVING:** $7,800
APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and/or its affiliates (“Regal”) with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer’s risk.

For a copy of our Standard Terms and Conditions of Sale, please visit http://www.regalbeloit.com (please see link at bottom of page to “Standard Terms and Conditions of Sale”). These terms and conditions of sale, disclaimers and limitations of liability apply to any person who may buy, acquire or use a Regal product referred to herein, including any person who buys from a licensed distributor of these branded products.