Instruction Manual for DODGE®
Setscrew, Eccentric Collar, D-Lok, H-E Series, E-Z Kleen,
Ultra Kleen and Food Safe Mounted Ball Bearings

These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of
printing. Please see baldor.com for updated instruction manuals.

Note! The manufacturer of these products, Baldor Electric Company, became ABB Motors and Mechanical Inc. on
March 1, 2018. Nameplates, Declaration of Conformity and other collateral material may contain the company name of
Baldor Electric Company and the brand names of Baldor-Dodge and Baldor-Reliance until such time as all materials have
been updated to reflect our new corporate identity.

WARNING: To ensure the drive is not unexpectedly started, turn off and lock-out or tag power source before
proceeding. Failure to observe these precautions could result in bodily injury.

WARNING: All products over 25 kg (55 lbs) are noted on the
shipping package. Proper lifting practices are required for these
products.

CAUTION: Under certain operating conditions. It is possible for static electric charge to build up on E-Z
Kleen/Ultra Kleen Polymer Housings. Do not operate these bearings in an environment where a sudden static
discharge may cause either an operating hazard or personnel discomfort.

Installation
1. Clean shaft and bearing bore thoroughly. Measure and
confirm shaft size and tolerance. File flats on shaft at
setscrew locations to permit easy removal of bearing.
2. Slip bearing into position. Be sure that bearing is not on a
worn section of the shaft. For tighter fits, tap inner ring face
only with soft driver. DO NOT HAMMER ON HOUSING.
3. The bearing outer ring OD is spherical and swivels in the
housing to accommodate misalignment. Snug hold-down
bolts and use shaft to swivel each bearing until its final
position is in the center of free movement top to bottom
as well as side to side. Pass shaft through both bearings
without forcing. This will prevent preloading of the bearings.
Housing slippage depends on the mounting hold-down
bolt tightening torque, number of bolts and friction
characteristics between mounting surfaces. Auxiliary load
carrying devices such as shear bars are advisable for side
or end loading of pillow blocks and radial loads for flange
units where normal to heavy loading or shock loading is
encountered.

NOTE: On coated and non-metallic housings, hold-
down bolts should be tightened carefully with flat
washers to prevent damage to the coating. Coated
housings have reduced friction characteristics,
so auxiliary load carrying devices are even more
important in those applications.

1. Tighten hold-down bolts to proper torque (Table 1). Turn
shaft by hand. Resistance to turning should be the same as
before full tightening of hold-down bolts.
2. For setscrew mounted bearings: After final alignment
of the shaft, tighten both setscrews hand tight, then
the setscrews should be tightened alternately and in
small increments to the torque specified in Table 1. After
24 hours operation, the setscrews should be retightened
to the torque in Table 1 to assure full locking of the inner
race to the shaft. Care should be taken that the socket
key or driver is in good condition with no rounded corners
and the key is fully engaged in the setscrew and held
square with the setscrew to prevent rounding out of the
setscrew socket when applying maximum torque. Do not
drill through the setscrew holes for spot drilling of the
shaft. (Some inner rings have tempered setscrew threads
and can be damaged by a drill.) If spot drilling is required,
locate bearings on the shaft and center punch through
the setscrew hole. Remove bearing and spot drill the
shaft, then reassemble over the spot drilled position and
assemble as above. Milled or filed flats are preferable to
spot drilling.

NOTE: On all Setscrew Product the setscrews can be
re-torqued many times without damage to the bearing
system. To achieve maximum shaft holding power it is
highly recommended that setscrews be replaced with
new hardware after any disassembly operation.
3. For eccentric collar mounted bearings, slide collar against cam end of inner race. Use a punch in the hole provided in the collar, tap collar smartly in the direction of shaft rotation. Tighten setscrews to proper torque (Table 1). To remove bearings, loosen setscrew and tap collar in the direction opposite of shaft rotation.

4. For D-LOK mounted bearings, be sure collar is square and tight against shoulder on inner ring. Tighten cap screw to recommended torque shown in Table 1.

5. For expansion bearings (H-E Series), locate inner unit in housing to allow expansion in the desired direction before locking to the shaft.

Table 1 - Recommended Torque

<table>
<thead>
<tr>
<th>Setscrews ①</th>
<th>D-LOK</th>
<th>Mounting Bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Torque ①</strong></td>
<td><strong>E-Z Kleen Recom. Torque</strong></td>
<td><strong>Metal Housings</strong></td>
</tr>
<tr>
<td><strong>Cap Screw Size</strong></td>
<td><strong>E-Z Kleen Recom. (Grade 2)</strong></td>
<td><strong>2-Bolt PB, 2 &amp; 4 Bolt Flg. and Flg. Brackets</strong></td>
</tr>
<tr>
<td><strong>Bolt Size</strong></td>
<td><strong>Bolt Size</strong></td>
<td><strong>Tapped-Base PB</strong></td>
</tr>
<tr>
<td><strong>Min</strong></td>
<td><strong>Max</strong></td>
<td><strong>Torque ②</strong></td>
</tr>
<tr>
<td>(in.)</td>
<td>(in.)</td>
<td>(in.-lbs.)</td>
</tr>
<tr>
<td>#10</td>
<td>3/32</td>
<td>28</td>
</tr>
<tr>
<td>1/4</td>
<td>5/64</td>
<td>66</td>
</tr>
<tr>
<td>5/16</td>
<td>3/16</td>
<td>126</td>
</tr>
<tr>
<td>3/8</td>
<td>3/16</td>
<td>228</td>
</tr>
<tr>
<td>7/16</td>
<td>7/32</td>
<td>342</td>
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<tr>
<td><strong>(mm)</strong></td>
<td><strong>(mm)</strong></td>
<td><strong>(N-m)</strong></td>
</tr>
<tr>
<td>M5</td>
<td>2.5</td>
<td>3.2</td>
</tr>
<tr>
<td>M6</td>
<td>3</td>
<td>6.2</td>
</tr>
<tr>
<td>M8</td>
<td>4</td>
<td>14.2</td>
</tr>
<tr>
<td>M10</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>M12</td>
<td>6</td>
<td>46</td>
</tr>
</tbody>
</table>

① The use of oils or locking agents on setscrews is not recommended. However, if utilized, the minimum installation torque values should be followed.
② Torque for Austenitic (18-8) Stainless Steel.
③ Maximum torque values published. Do not exceed.

**Lubrication**

Food safe bearings cannot be re-lubricated.

High Speed Operation - In the higher speed ranges, too much grease will cause over-heating. The amount of grease that the bearing will take for a particular high speed application can only be determined by experience. If excess grease in the bearing causes overheating, it will be necessary to remove grease fitting to permit excess grease to escape. The bearing has been greased at the factory and is ready to run. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

Table 2 - Lubrication Guide

<table>
<thead>
<tr>
<th>Hours Run Per Day</th>
<th>Suggested Lubrication Period in Weeks</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1 to 250 RPM</td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
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<td></td>
<td>24</td>
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</tbody>
</table>

*For E-Z Kleen/Ultra Kleen series bearings, use an aluminum complex base grease.

Lubrication recommendations are intended for standard products applied in general operating conditions. For modified products, high temperature applications, and other anomalous applications contact product engineering at 864-284-5700.

Successful operation is dependent upon adequate lubrication. Precuation should be taken during handling and recycling grease, oil or water glycol mixtures.