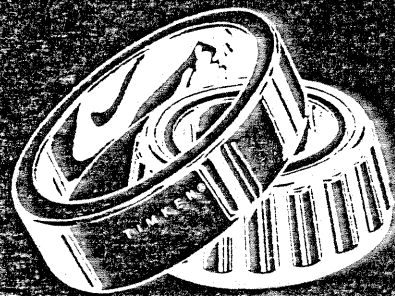
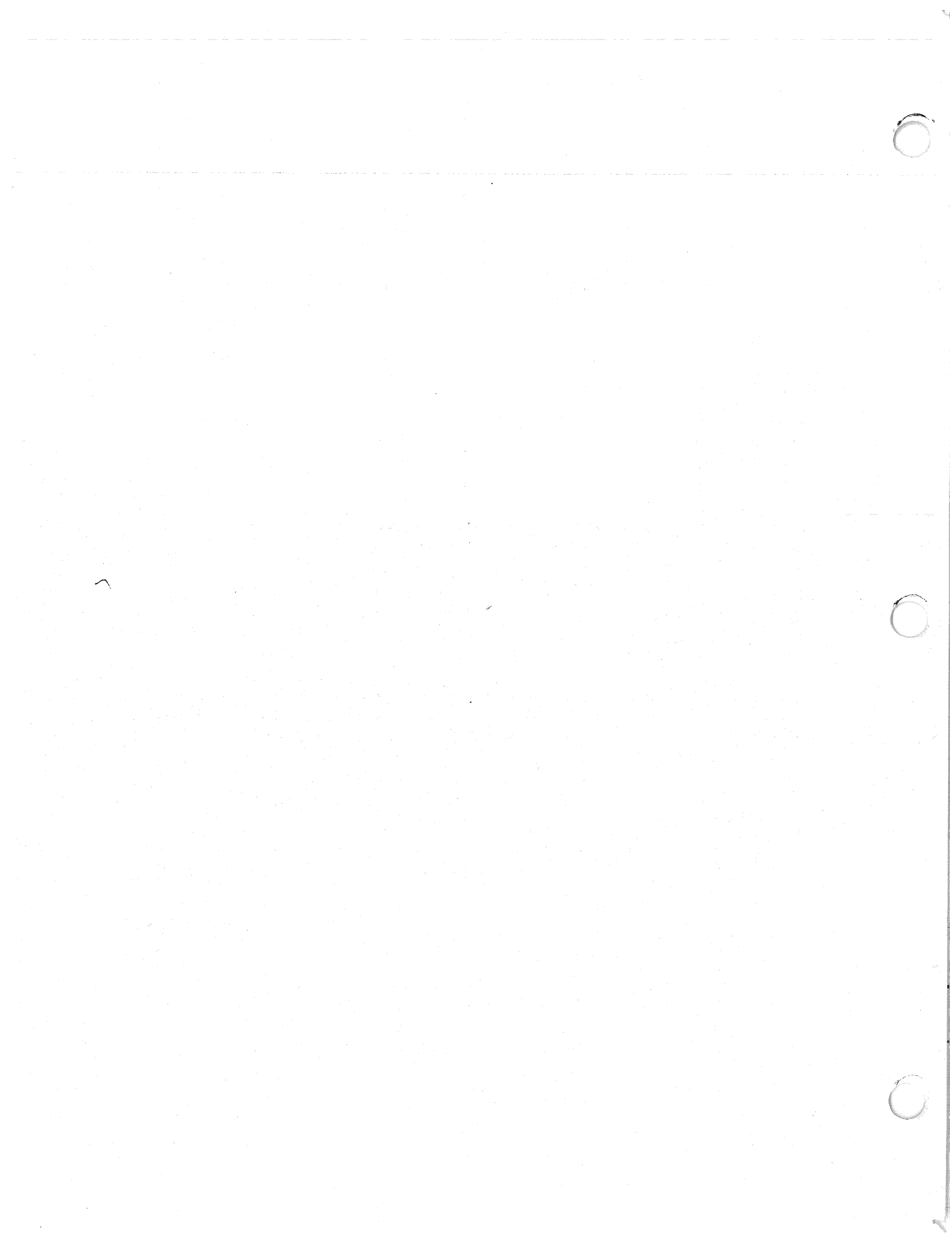


"AP" AND "SP" BEARINGS

APPLICATIONS AND STYLES



**TIMKEN**



## FOREWORD

Both the Timken "AP" and "SP" bearing can be adapted to a wide variety of applications. Design engineers throughout the world have taken advantage of the high capacity, rugged, self-contained preassembled and pregreased bearing that was originally developed for high mileage railroad usage.

The price of these assemblies are quite competitive because they are produced in high volume on the latest automated equipment. Every component from cups to cones to grease to seals has been extensively tested to assure reliable service under adverse operating conditions.

Equipment such as cranes, continuous casting machines, table rolls, almost every type of rail car, elevator sheaves, trunnion rolls now use this type of bearing. The self-contained, pregreased unit allows, in many cases, very long periods between relubrication. It is not uncommon for cranes to go 10 years before adding grease. This allows the elimination of expensive automatic relubrication systems.

For those who have used the Timken bearing styles book in the past, it will be noticed that there are a number of additions. In addition to the "AP" inch system bore and O.D. bearing, there is also the "SP" bearing with metric system bore and O.D. Cones and cups are interchangeable between "AP" and "SP". Because of increasing demand for larger bearings, there is now the Class K "AP" with an 8" bore.

The various styles of bearings are illustrated on pages 3 and 4. These illustrations will aid you in determining the most desirable style for your mounting conditions. Each illustration is identified by a style number to facilitate reference.

Mounting dimensions and other useful information for each bearing style is shown in both inch and metric dimensions. Necessary detail application information and dimensions are covered in fitting practice on pages 36 and 37, housing dimensions on page 35 and axle dimensions on page 34.

To correctly identify a bearing, reference should be made to (1) style number, (2) bearing class and size, and (3) assembly number, if shown.

All applications should be submitted for engineering review to The Timken Company for which associated axle, wheel and frame details should be furnished.

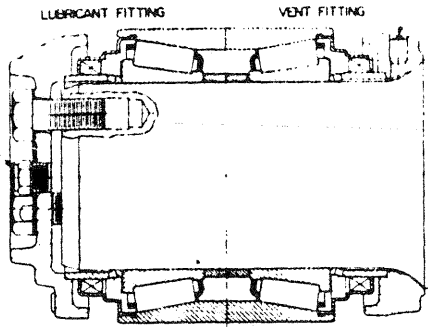
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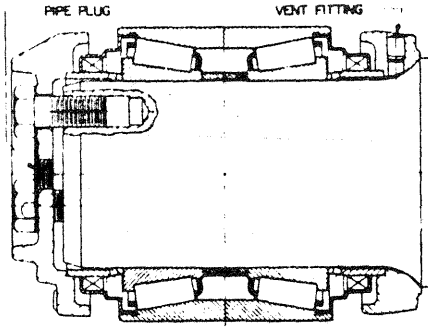
Dimensions are shown in both inches and metric

LOWER LINE INDICATES METRIC

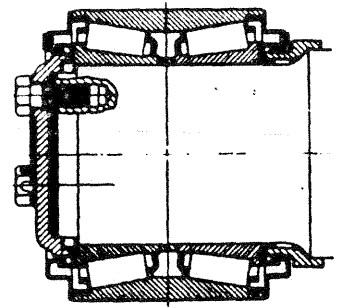
# "AP" & "SP" STYLES



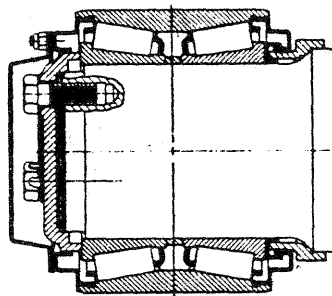
Style 1



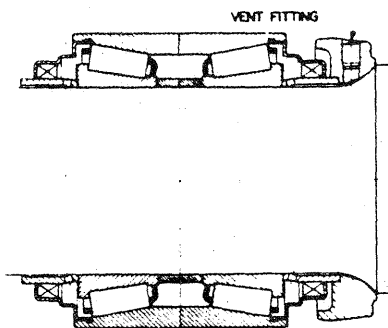
Style 1-A



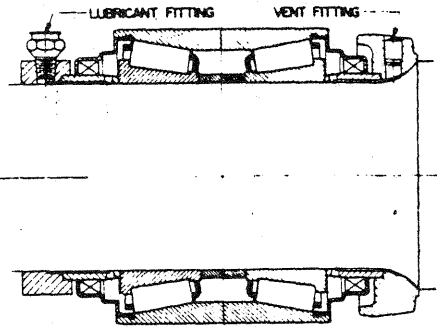
Style 1-B



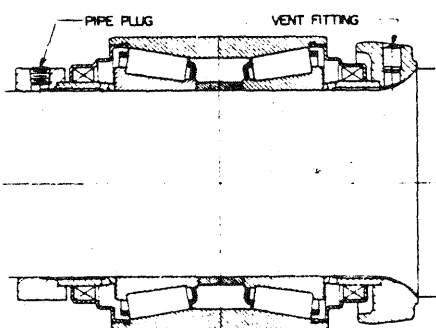
Style 1-C



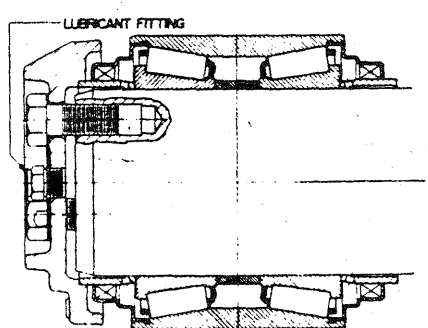
Style 2



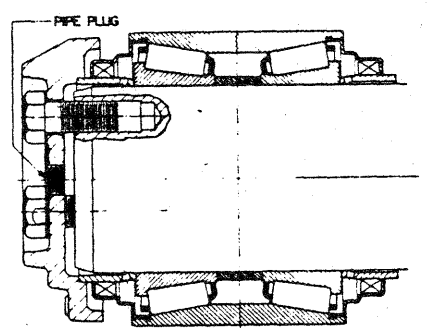
Style 2-A



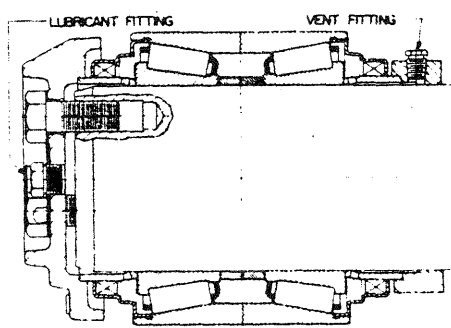
Style 2-B



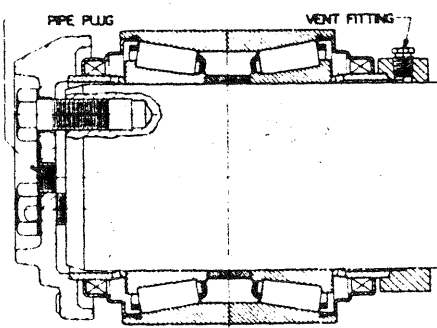
Style 3



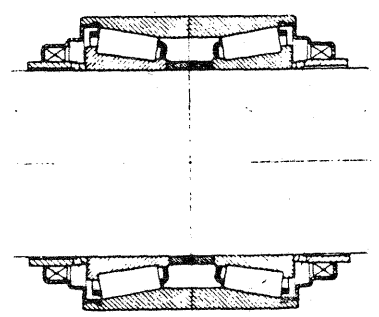
Style 3-A



Style 3-B

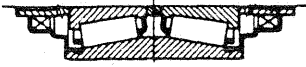
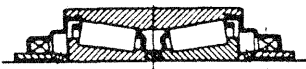


Style 3-C

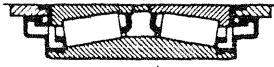
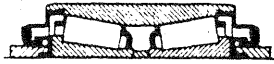


Style 4

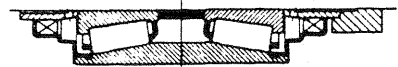
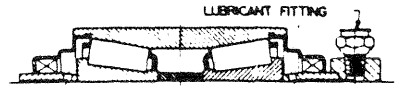
# "AP" & "SP" STYLES



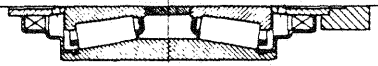
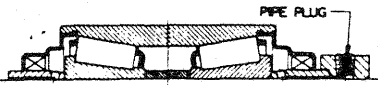
Style 4-A



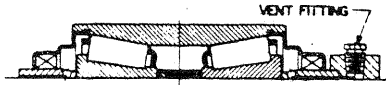
Style 4-B



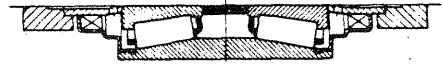
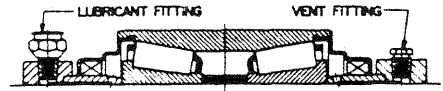
Style 5



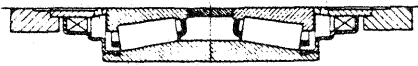
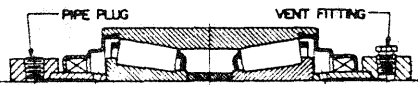
Style 5-A



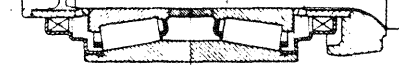
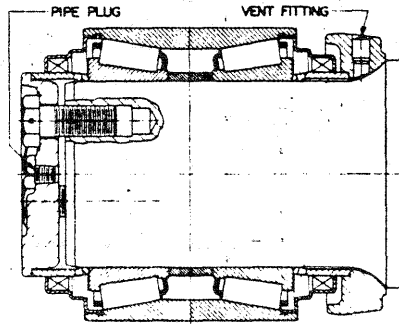
Style 5-B



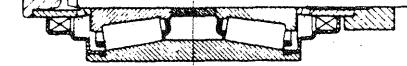
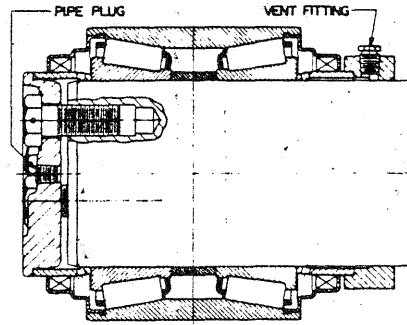
Style 5-C



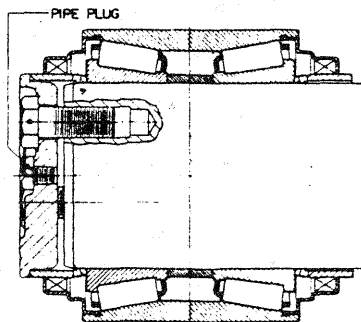
Style 5-D



Style 6

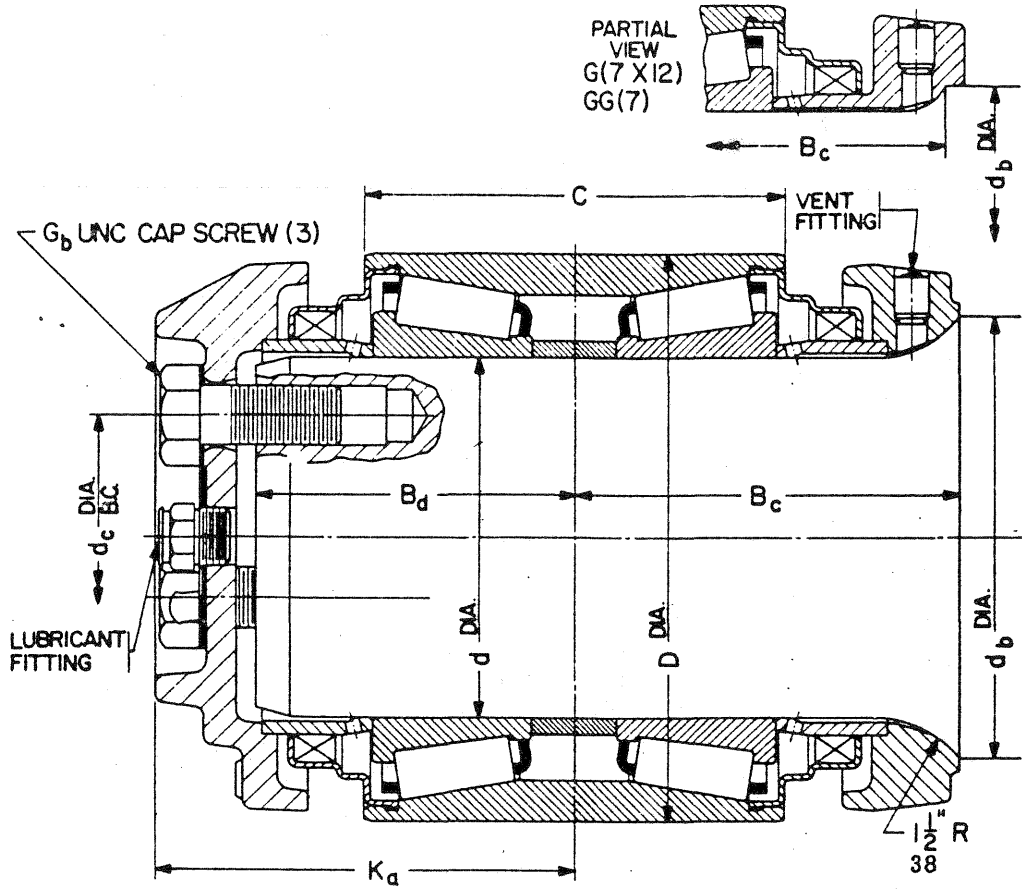


Style 6-A



Style 6-B

# Style 1

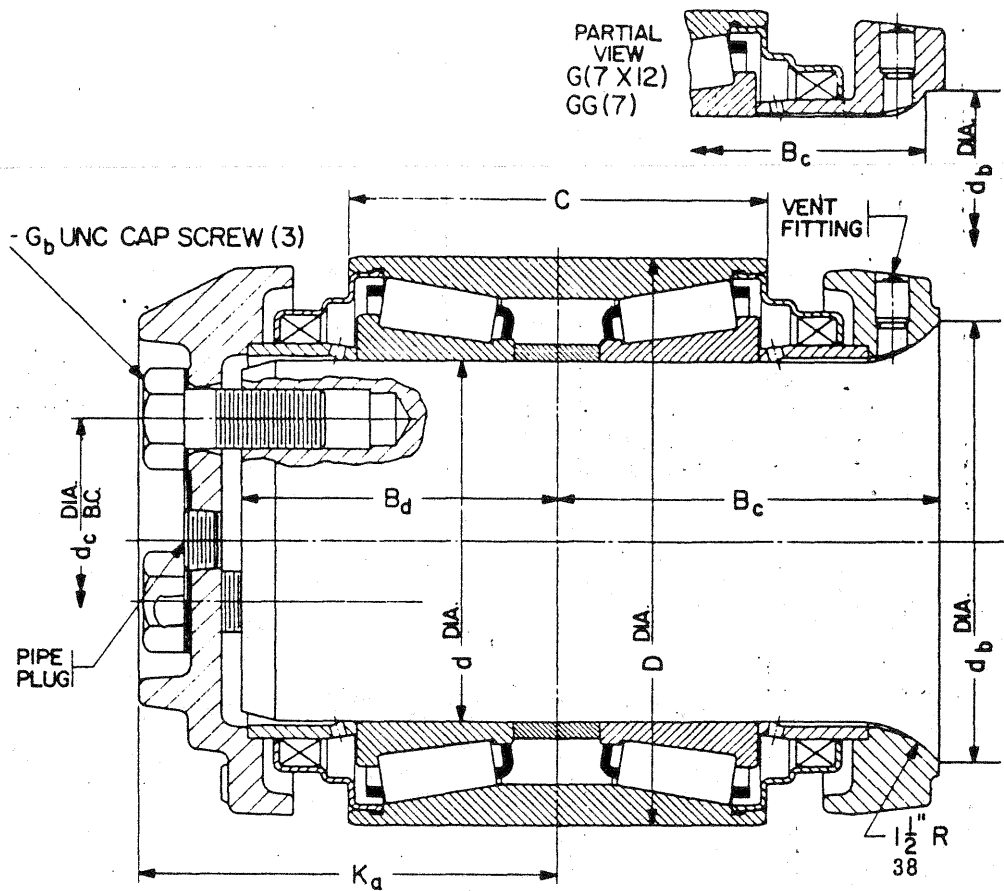


| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | B <sub>d</sub> | B <sub>c</sub> | K <sub>a</sub> <sup>*</sup><br>(max) | C             | d <sub>b</sub>  | G <sub>b</sub> | d <sub>c</sub> |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|--------------------------------------|---------------|-----------------|----------------|----------------|
| B (4 1/4 x 8)  | HM120848<br>90023 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102       | 4 5/8<br>117   | 6 7/32<br>158                        | 4 1/2<br>114  | 5<br>127        | 3/4-10         | 2 7/16<br>62   |
| C (5 x 9)      | HM124646<br>90047 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113  | 5 5/16<br>135  | 6 11/16<br>170                       | 5 5/8<br>143  | 5 7/8<br>149    | 7/8 - 9        | 3<br>76        |
| D (5 1/2 x 10) | HM127446<br>90011 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116  | 5 1/2<br>140   | 6 7/32<br>158                        | 6<br>152      | 6 3/8<br>162    | 7/8 - 9        | 3 1/2<br>89    |
| E (6 x 11)     | HM129848<br>90011 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127       | 5 15/16<br>151 | 6 43/64<br>169                       | 6 7/16<br>164 | 7<br>178        | 1 - 8          | 3 7/8<br>98    |
| F (6 1/2 x 12) | HM133444<br>90015 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135  | 6 7/16<br>164  | 7 9/64<br>181                        | 7 1/4<br>184  | 7 1/2<br>190    | 1 1/8-7        | 4 1/4<br>108   |
| G (7 x 12)     | HM136948<br>90049 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 5 15/16<br>151 | 7 5/64<br>180                        | 7 5/16<br>186 | 8.000<br>203,20 | 1 1/4-7        | 4 5/8<br>117   |
| G (7 x 14)     | HM136948<br>90093 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 6 7/16<br>164  | 7 5/64<br>180                        | 7 5/16<br>186 | 8<br>203        | 1 1/4-7        | 4 5/8<br>117   |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135  | 6 1/8<br>156   | 7 17/64<br>185                       | 7 3/4<br>197  | 8.000<br>203,20 | 1 1/4-7        | 4 5/8<br>117   |

\* On Classes B, C and D the lubricant fitting extends beyond the axle end cap.  
Dimensions given for these classes are to lubricant fitting.



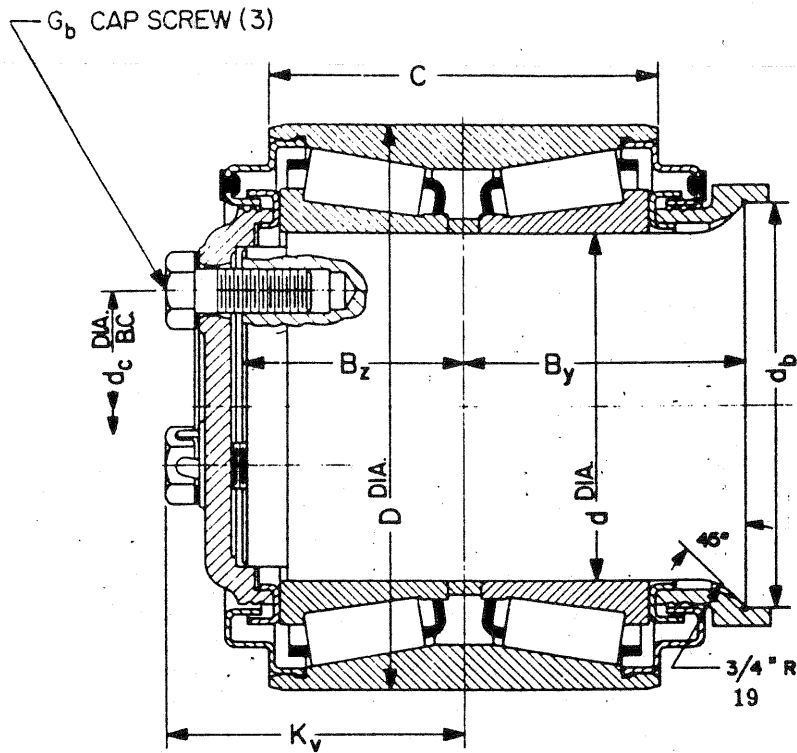
# Style 1-A



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | B <sub>d</sub> | B <sub>c</sub> | K <sub>a</sub> (max) | C             | d <sub>b</sub>  | G <sub>b</sub> | d <sub>c</sub> |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|----------------------|---------------|-----------------|----------------|----------------|
| B (4 1/4 x 8)  | HM120848<br>90011 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102       | 4 5/8<br>117   | 5 35/64<br>141       | 4 1/2<br>114  | 5<br>127        | 3/4-10         | 2 7/16<br>62   |
| C (5 x 9)      | HM124646<br>90013 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113  | 5 5/16<br>135  | 6 3/64<br>154        | 5 5/8<br>143  | 5 7/8<br>149    | 7/8 - 9        | 3<br>76        |
| D (5 1/2 x 10) | HM127446<br>90013 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116  | 5 1/2<br>140   | 6 11/64<br>157       | 6<br>152      | 6 3/8<br>162    | 7/8 - 9        | 3 1/2<br>89    |
| E (6 x 11)     | HM129848<br>90013 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127       | 5 15/16<br>151 | 6 43/64<br>169       | 6 7/16<br>164 | 7<br>178        | 1 - 8          | 3 7/8<br>98    |
| F (6 1/2 x 12) | HM133444<br>90011 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135  | 6 7/16<br>164  | 7 9/64<br>181        | 7 1/4<br>184  | 7 1/2<br>190    | 1 1/8-7        | 4 1/4<br>108   |
| G (7 x 12) *   | HM136948<br>90051 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 5 15/16<br>151 | 7 5/64<br>180        | 7 5/16<br>186 | 8.000<br>203,20 | 1 1/4-7        | 4 5/8<br>117   |
| G (7 x 14)     | HM136948<br>90085 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 6 7/16<br>164  | 7 5/64<br>180        | 7 5/16<br>186 | 8<br>203        | 1 1/4-7        | 4 5/8<br>117   |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135  | 6 1/8<br>156   | 7 17/64<br>185       | 7 3/4<br>197  | 8.000<br>203,20 | 1 1/4-7        | 4 5/8<br>117   |



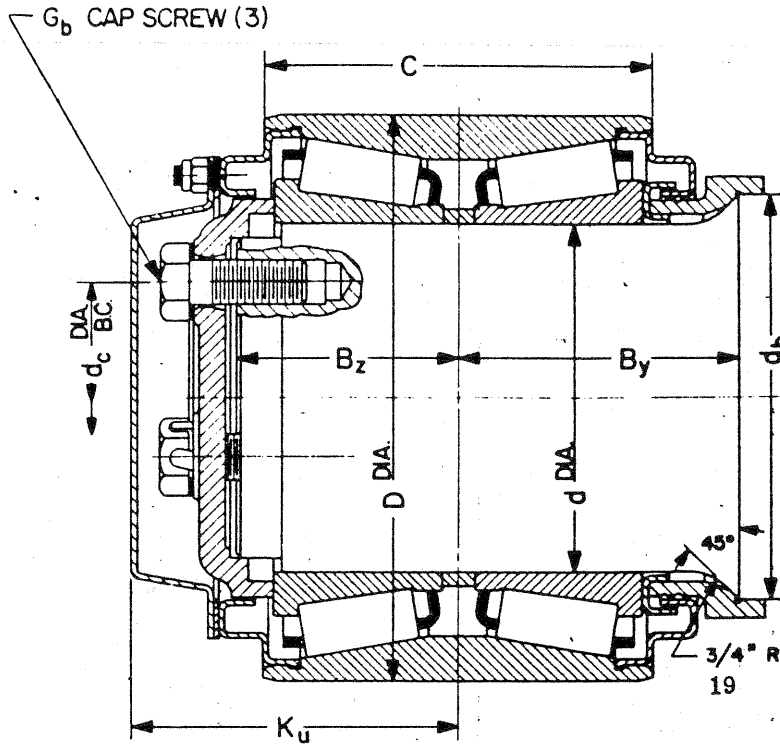
# Style 1-B



| CLASS | ASSEMBLY NUMBER | d *               | D *               | C              | K <sub>v</sub> (max.) | G <sub>b</sub>             | d <sub>b</sub>                   | d <sub>c</sub> | B <sub>y</sub> | B <sub>z</sub> |
|-------|-----------------|-------------------|-------------------|----------------|-----------------------|----------------------------|----------------------------------|----------------|----------------|----------------|
| SP120 |                 | 4.7237<br>119,982 | 7.6772<br>195,000 | 5 11/64<br>132 | 4<br>102              | 5/8 - 11 UNC<br>M16x2-6H   | 5.4375-5.4379<br>138,162-138,122 | 3 5/32<br>80   | 3 35/64<br>90  | 2 61/64<br>75  |
| SP130 |                 | 5.1178<br>129,992 | 8.2677<br>210,000 | 5 13/64<br>132 | 4 3/32<br>104         | 5/8 - 11 UNC<br>M16x2-6H   | 5.9124-5.9108<br>150,174-150,134 | 3 5/32<br>80   | 3 47/64<br>95  | 2 61/64<br>75  |
| SP140 |                 | 5.5115<br>139,992 | 8.6614<br>220,000 | 5 33/64<br>140 | 4 11/32<br>110        | 5/8 - 11 UNC<br>M16x2-6H   | 6.3061-6.3045<br>160,174-160,134 | 3 15/16<br>100 | 3 15/16<br>100 | 3 5/32<br>80   |
| SP150 |                 | 5.9052<br>149,992 | 9.8425<br>250,000 | 6 19/64<br>160 | 4 7/8<br>124          | 3/4 - 10 UNC<br>M20x2.5-6H | 6.7002-6.6986<br>170,186-170,146 | 3 15/16<br>100 | 4 9/64<br>105  | 3 35/64<br>90  |

\*Dimension shown is maximum value. See pages 36 and 37 for complete fitting practice information.

# Style 1-C

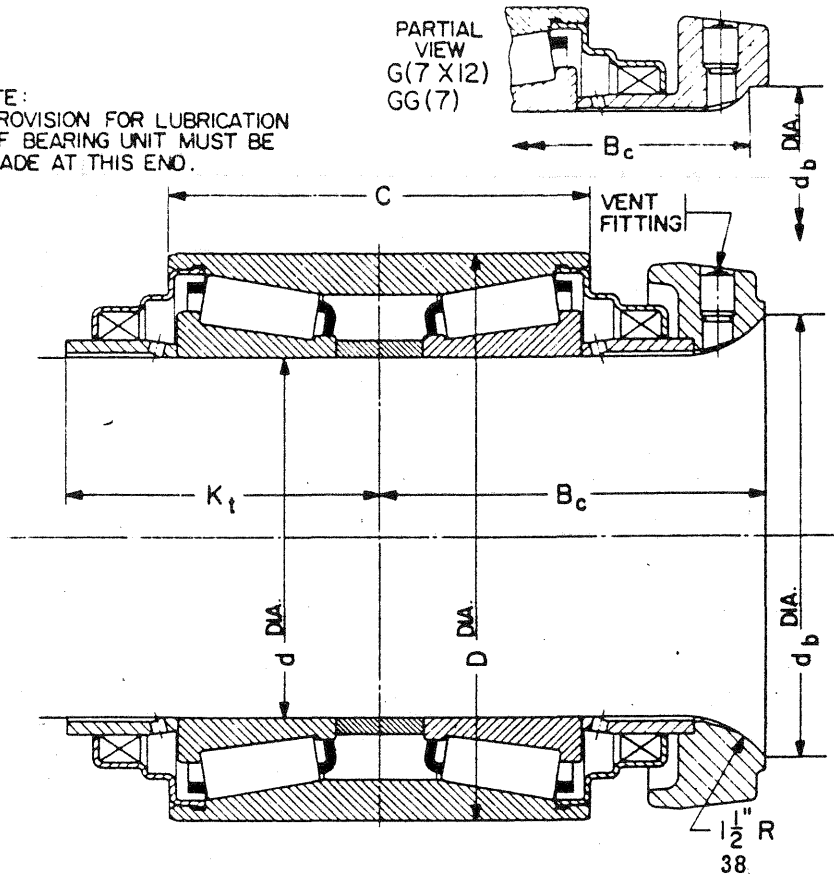


| CLASS | ASSEMBLY NUMBER   | $d^*$             | $D^*$             | $C$            | $K_u$ (max.)   | $G_b$                   | $d_b$                            | $d_c$          | $B_y$          | $B_z$         |
|-------|-------------------|-------------------|-------------------|----------------|----------------|-------------------------|----------------------------------|----------------|----------------|---------------|
| SP120 | HM124649<br>90087 | 4.7237<br>119,982 | 7.6772<br>195,000 | 5 11/64<br>132 | 4 21/64<br>110 | 5/8-11UNC<br>M16x2-6H   | 5.4375-5.4379<br>138,162-138,122 | 3 5/32<br>80   | 3 35/64<br>90  | 2 61/64<br>75 |
| SP130 |                   | 5.1178<br>129,992 | 8.2677<br>210,000 | 5 13/64<br>132 | 4 13/32<br>112 | 5/8-11UNC<br>M16x2-6H   | 5.9124-5.9108<br>150,174-150,134 | 3 5/32<br>80   | 3 47/64<br>95  | 2 61/64<br>75 |
| SP140 | HM129843<br>90139 | 5.5115<br>139,992 | 8.6614<br>220,000 | 5 33/64<br>140 | 4 41/64<br>118 | 5/8-11UNC<br>M16x2-6H   | 6.3061-6.3045<br>160,174-160,134 | 3 15/16<br>100 | 3 15/16<br>100 | 3 5/32<br>80  |
| SP150 | HM133436<br>90137 | 5.9052<br>149,992 | 9.8425<br>250,000 | 6 19/64<br>160 | 5 13/64<br>132 | 3/4-10UNC<br>M20x2.5-6H | 6.7002-6.6986<br>170,186-170,146 | 3 15/16<br>100 | 4 9/64<br>105  | 3 35/64<br>90 |

\*Dimension shown is maximum value. See pages 36 and 37 for complete fitting practice information.

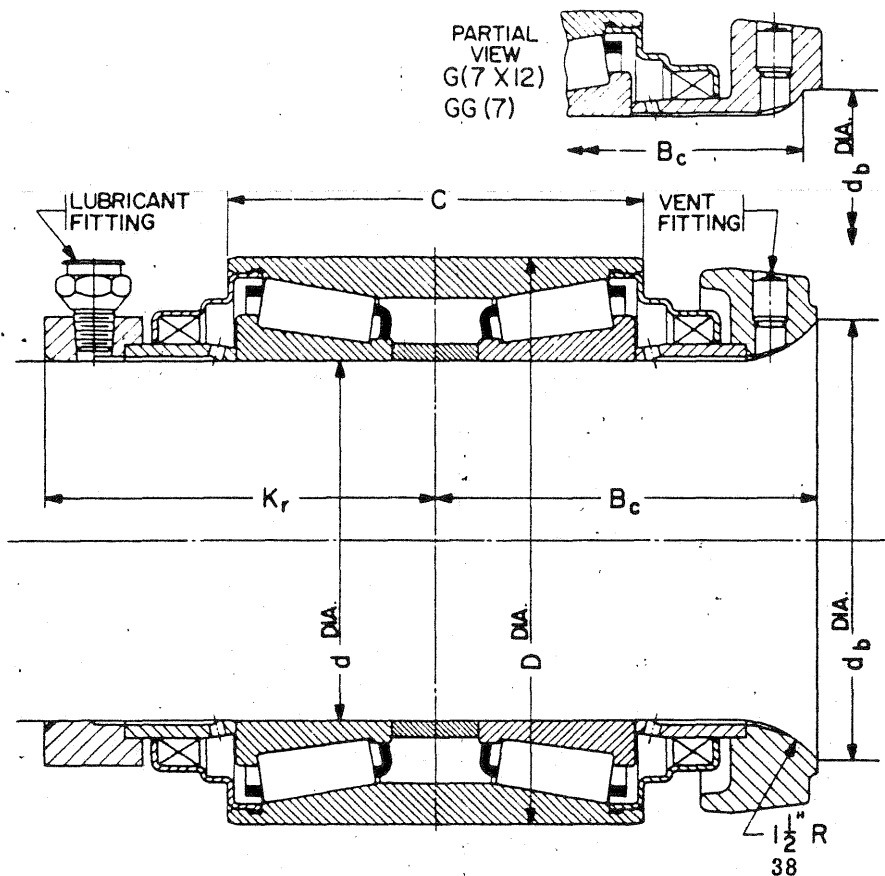
# Style 2

NOTE:  
PROVISION FOR LUBRICATION  
OF BEARING UNIT MUST BE  
MADE AT THIS END.



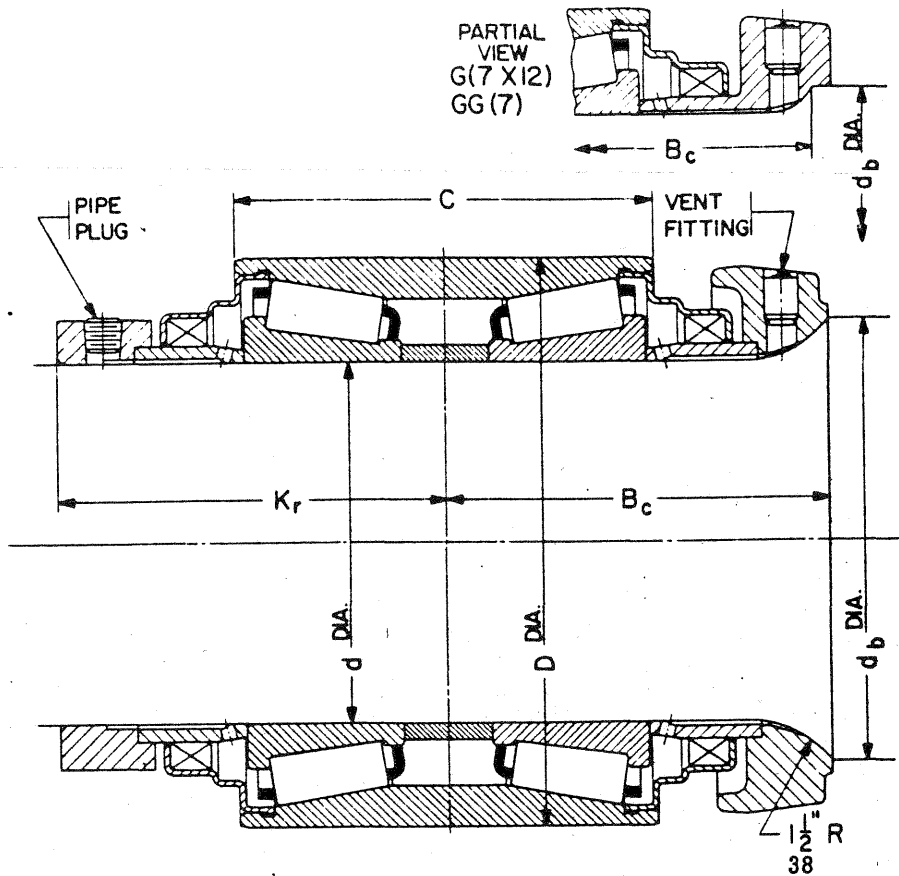
| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $K_t$          | $B_c$          | C             | $d_b$           |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|-----------------|
| B (4 1/4 x 8)  | HM120848<br>90012 | 4.0000<br>101,600 | 6.5000<br>165,100  | 3 19/32<br>91  | 4 5/8<br>117   | 4 1/2<br>114  | 5<br>127        |
| C (5 x 9)      | HM124646<br>90014 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 9/32<br>109  | 5 5/16<br>135  | 5 5/8<br>143  | 5 7/8<br>149    |
| D (5 1/2 x 10) | HM127446<br>90012 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 15/32<br>114 | 5 1/2<br>140   | 6<br>152      | 6 3/8<br>162    |
| E (6 x 11)     | HM129848<br>90012 | 5.6875<br>144,462 | 8.6875<br>220,662  | 4 3/4<br>121   | 5 15/16<br>151 | 6 7/16<br>164 | 7<br>178        |
| F (6 1/2 x 12) | HM133444<br>90012 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 3/8<br>137   | 6 7/16<br>164  | 7 1/4<br>184  | 7 1/2<br>190    |
| G (7 x 12)     | HM136948<br>90048 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 5 15/16<br>151 | 7 5/16<br>186 | 8.000<br>203,20 |
| G (7 x 14)     | HM136948<br>90012 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 6 7/16<br>164  | 7 5/16<br>186 | 8<br>203        |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 1/2<br>140   | 6 1/8<br>156   | 7 3/4<br>197  | 8.000<br>203,20 |

# Style 2-A



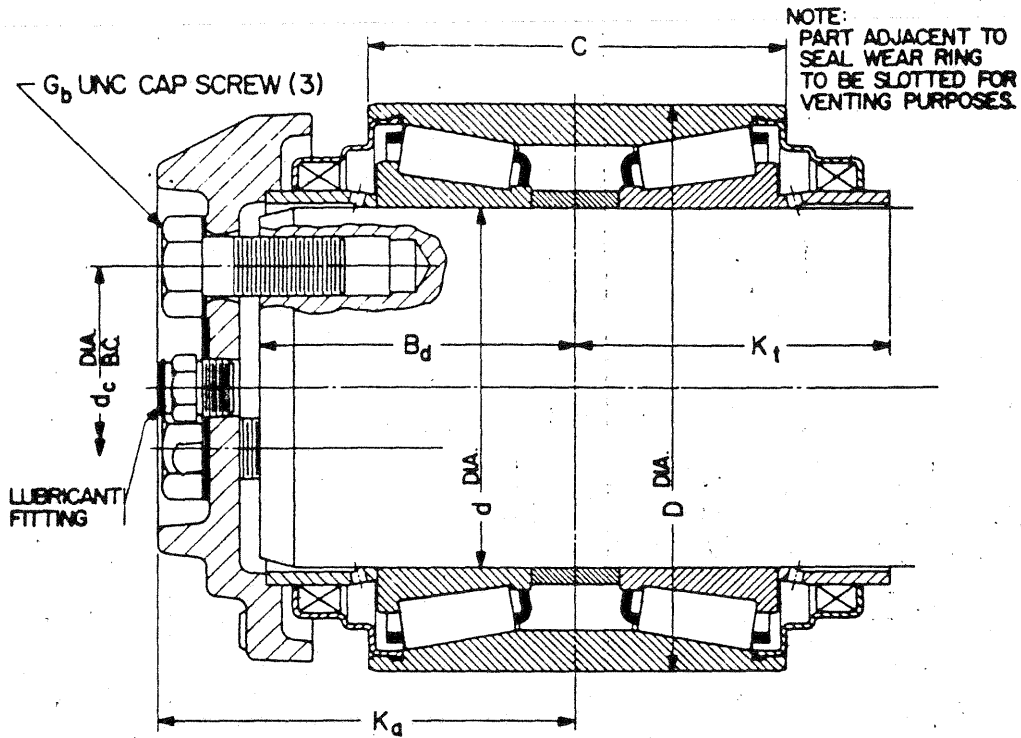
| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $K_r$          | $B_c$          | C             | $d_b$           |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|-----------------|
| B (4 1/4 x 8)  | HM120848<br>90080 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4 23/32<br>120 | 4 5/8<br>117   | 4 1/2<br>114  | 5<br>127        |
| C (5 x 9)      | HM124646<br>90086 | 4.6875<br>119,062 | 7.6875<br>195,262  | 5 13/32<br>137 | 5 5/16<br>135  | 5 5/8<br>143  | 5 7/8<br>149    |
| D (5 1/2 x 10) | HM127446<br>90120 | 5.1875<br>131,762 | 8.1875<br>207,962  | 5 19/32<br>142 | 5 1/2<br>140   | 6<br>152      | 6 3/8<br>162    |
| E (6 x 11)     | HM129848<br>90142 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5 7/8<br>149   | 5 15/16<br>151 | 6 7/16<br>164 | 7<br>178        |
| F (6 1/2 x 12) | HM133444<br>90124 | 6.1875<br>157,162 | 9.9375<br>252,412  | 6 1/2<br>165   | 6 7/16<br>164  | 7 1/4<br>184  | 7 1/2<br>190    |
| G (7 x 12)     | HM136948<br>90124 | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 5 15/16<br>151 | 7 5/16<br>186 | 8.000<br>203,20 |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 6 7/16<br>164  | 7 5/16<br>186 | 8<br>203        |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 6 5/8<br>168   | 6 1/8<br>156   | 7 3/4<br>197  | 8.000<br>203,20 |

# Style 2-B



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $K_r$          | $B_c$          | C             | $d_b$           |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|-----------------|
| B (4 1/4 x 8)  | HM120848<br>90086 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4 23/32<br>120 | 4 5/8<br>117   | 4 1/2<br>114  | 5<br>127        |
| C (5 x 9)      | HM124646<br>90078 | 4.6875<br>119,062 | 7.6875<br>195,262  | 5 13/32<br>137 | 5 5/16<br>135  | 5 5/8<br>143  | 5 7/8<br>149    |
| D (5 1/2 x 10) | HM127446<br>90118 | 5.1875<br>131,762 | 8.1875<br>207,962  | 5 19/32<br>142 | 5 1/2<br>140   | 6<br>152      | 6 3/8<br>162    |
| E (6 x 11)     | HM129848<br>90126 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5 7/8<br>149   | 5 15/16<br>151 | 6 7/16<br>164 | 7<br>178        |
| F (6 1/2 x 12) | HM133444<br>90122 | 6.1875<br>157,162 | 9.9375<br>252,412  | 6 1/2<br>165   | 6 7/16<br>164  | 7 1/4<br>184  | 7 1/2<br>190    |
| G (7 x 12)     | HM136948<br>90146 | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 5 15/16<br>151 | 7 5/16<br>186 | 8.000<br>203,20 |
| G (7 x 14)     | HM136948<br>90108 | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 6 7/16<br>164  | 7 5/16<br>186 | 8<br>203        |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 6 5/8<br>168   | 6 1/8<br>156   | 7 3/4<br>197  | 8.000<br>203,20 |

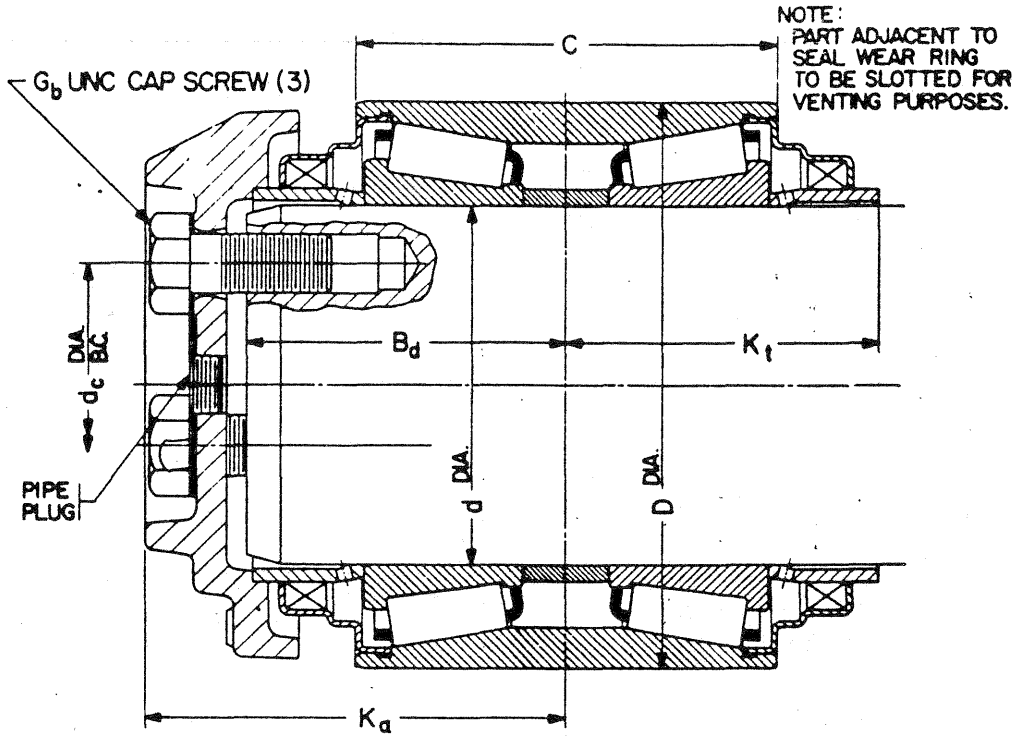
# Style 3



| CLASS        | ASSEMBLY NUMBER   | d                 | D                  | B <sub>d</sub> | K <sub>t</sub> | K <sub>a</sub> * (max.) | C             | G <sub>b</sub> | d <sub>c</sub> |
|--------------|-------------------|-------------------|--------------------|----------------|----------------|-------------------------|---------------|----------------|----------------|
| (4 1/4 x 8)  | HM120848<br>90091 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102       | 3 19/32<br>91  | 6 7/32<br>158           | 4 1/2<br>114  | 3/4 - 10       | 2 7/16<br>62   |
| (5 x 9)      | HM124646<br>90085 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113  | 4 9/32<br>109  | 6 11/16<br>170          | 5 5/8<br>143  | 7/8 - 9        | 3<br>76        |
| (5 1/2 x 10) | HM127446<br>90093 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116  | 4 15/32<br>114 | 6 7/32<br>158           | 6<br>152      | 7/8 - 9        | 3 1/2<br>89    |
| (6 x 11)     | HM129848<br>90169 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127       | 4 3/4<br>121   | 6 43/64<br>169          | 6 7/16<br>164 | 1 - 8          | 3 7/8<br>98    |
| (6 1/2 x 12) | HM133444<br>90107 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135  | 5 3/8<br>137   | 7 9/64<br>181           | 7 1/4<br>184  | 1 1/8 - 7      | 4 1/4<br>108   |
| (7 x 14)     | HM136948<br>90137 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 5 5/16<br>135  | 7 5/64<br>180           | 7 5/16<br>186 | 1 1/4 - 7      | 4 5/8<br>117   |
| (7)          |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135  | 5 1/2<br>140   | 7 17/64<br>185          | 7 3/4<br>197  | 1 1/4 - 7      | 4 5/8<br>117   |

\*On Classes B, C and D, the lubricant fitting extends beyond the axle end cap. Dimensions given for these classes are to lubricant fitting.

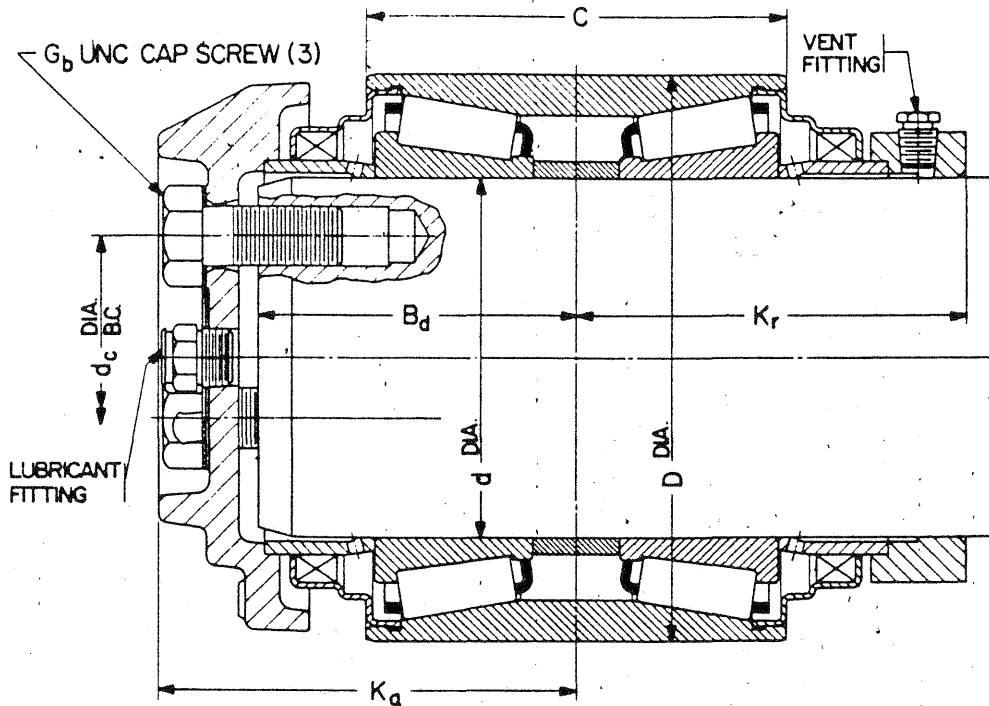
# Style 3-A



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $B_d$         | $K_t$          | $K_a$ (max)    | C             | $G_b$     | $d_c$        |
|----------------|-------------------|-------------------|--------------------|---------------|----------------|----------------|---------------|-----------|--------------|
| B (4 1/4 x 8)  |                   | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102      | 3 19/32<br>91  | 5 35/64<br>141 | 4 1/2<br>114  | 3/4 - 10  | 2 7/16<br>62 |
| C (5 x 9)      | HM124646<br>90083 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113 | 4 9/32<br>109  | 6 3/64<br>154  | 5 5/8<br>143  | 7/8 - 9   | 3<br>76      |
| D (5 1/2 x 10) |                   | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116 | 4 15/32<br>114 | 6 11/64<br>157 | 6<br>152      | 7/8 - 9   | 3 1/2<br>89  |
| E (6 x 11)     |                   | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127      | 4 3/4<br>121   | 6 43/64<br>169 | 6 7/16<br>164 | 1 - 8     | 3 7/8<br>98  |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135 | 5 3/8<br>137   | 7 9/64<br>181  | 7 1/4<br>184  | 1 1/8 - 7 | 4 1/4<br>108 |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130  | 5 5/16<br>135  | 7 5/64<br>180  | 7 5/16<br>186 | 1 1/4 - 7 | 4 5/8<br>117 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135 | 5 1/2<br>140   | 7 17/64<br>185 | 7 3/4<br>197  | 1 1/4 - 7 | 4 5/8<br>117 |



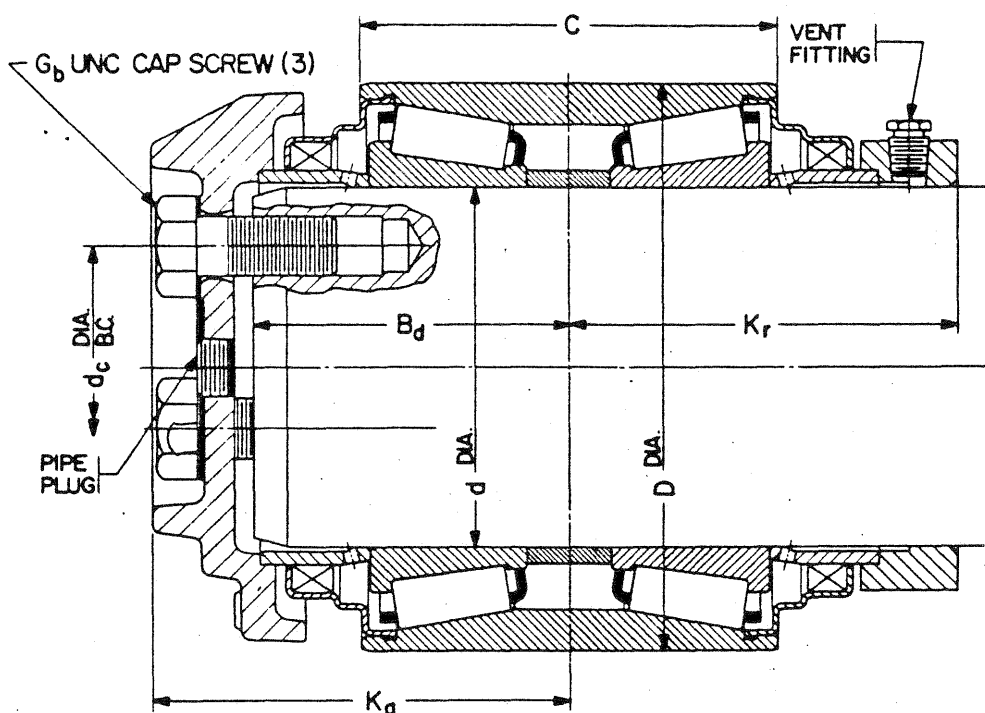
# Style 3-B



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | B <sub>d</sub> | K <sub>r</sub> | K <sub>a</sub> * (max.) | C             | G <sub>b</sub> | d <sub>c</sub> |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|-------------------------|---------------|----------------|----------------|
| B (4 1/4 x 8)  | HM120849<br>90115 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102       | 4 23/32<br>120 | 6 7/32<br>158           | 4 1/2<br>114  | 3/4 - 10       | 2 7/16<br>62   |
| C (5 x 9)      | HM124646<br>90089 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113  | 5 13/32<br>137 | 6 11/16<br>170          | 5 5/8<br>143  | 7/8 - 9        | 3<br>76        |
| D (5 1/2 x 10) | HM127446<br>90167 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116  | 5 19/32<br>142 | 6 7/32<br>158           | 6<br>152      | 7/8 - 9        | 3 1/2<br>89    |
| E (6 x 11)     | HM129848<br>90155 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127       | 5 7/8<br>149   | 6 43/64<br>169          | 6 7/16<br>164 | 1 - 8          | 3 7/8<br>98    |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135  | 6 1/2<br>165   | 7 9/64<br>181           | 7 1/4<br>184  | 1 1/8 - 7      | 4 1/4<br>108   |
| G (7 x 14)     | HM136948<br>90149 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130   | 6 7/16<br>164  | 7 5/64<br>180           | 7 5/16<br>186 | 1 1/4 - 7      | 4 5/8<br>117   |
| BG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135  | 6 5/8<br>168   | 7 17/64<br>185          | 7 3/4<br>197  | 1 1/4 - 7      | 4 5/8<br>117   |

\*On Classes B, C and D, the lubricant fitting extends beyond the axle end cap. Dimensions given for these classes are to lubricant fitting.

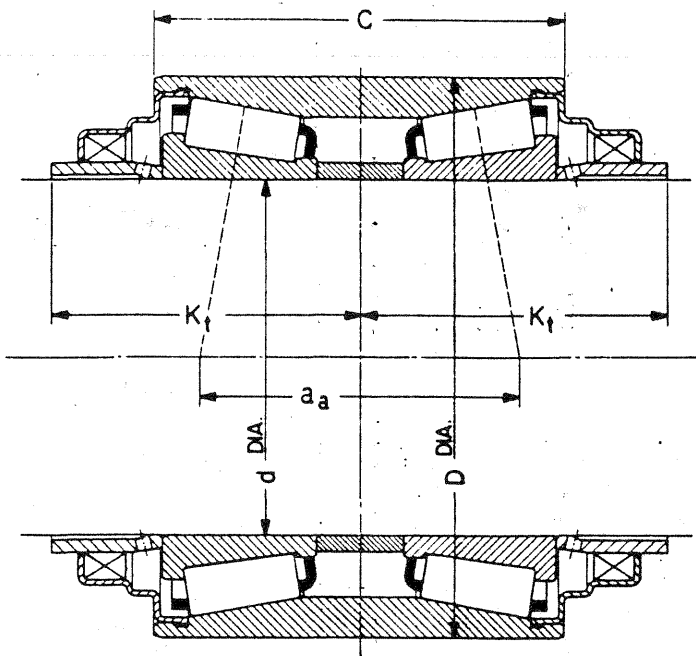
# Style 3-C



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $B_d$         | $K_r$          | $K_a$ (max)    | C             | $G_b$     | $d_c$        |
|----------------|-------------------|-------------------|--------------------|---------------|----------------|----------------|---------------|-----------|--------------|
| B (4 1/4 x 8)  | HM120848<br>90083 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4<br>102      | 4 23/32<br>120 | 5 35/64<br>141 | 4 1/2<br>114  | 3/4 - 10  | 2 7/16<br>62 |
| C (5 x 9)      |                   | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 7/16<br>113 | 5 13/32<br>137 | 6 3/64<br>154  | 5 5/8<br>143  | 7/8 - 9   | 3<br>76      |
| D (5 1/2 x 10) |                   | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 9/16<br>116 | 5 19/32<br>142 | 6 11/64<br>157 | 6<br>152      | 7/8 - 9   | 3 1/2<br>89  |
| E (6 x 11)     |                   | 5.6875<br>144,462 | 8.6875<br>220,662  | 5<br>127      | 5 7/8<br>149   | 6 43/64<br>169 | 6 7/16<br>164 | 1 - 8     | 3 7/8<br>98  |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 5/16<br>135 | 6 1/2<br>165   | 7 9/64<br>181  | 7 1/4<br>184  | 1 1/8 - 7 | 4 1/4<br>108 |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 1/8<br>130  | 6 7/16<br>164  | 7 5/64<br>180  | 7 5/16<br>186 | 1 1/4 - 7 | 4 5/8<br>117 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 5/16<br>135 | 6 5/8<br>168   | 7 17/64<br>184 | 7 3/4<br>197  | 1 1/4 - 7 | 4 5/8<br>117 |

# Style 4

NOTE:  
PART ADJACENT TO SEAL WEAR RING, ON  
END OPPOSITE LUBRICANT FITTING, TO  
BE SLOTTED FOR VENTING PURPOSES.

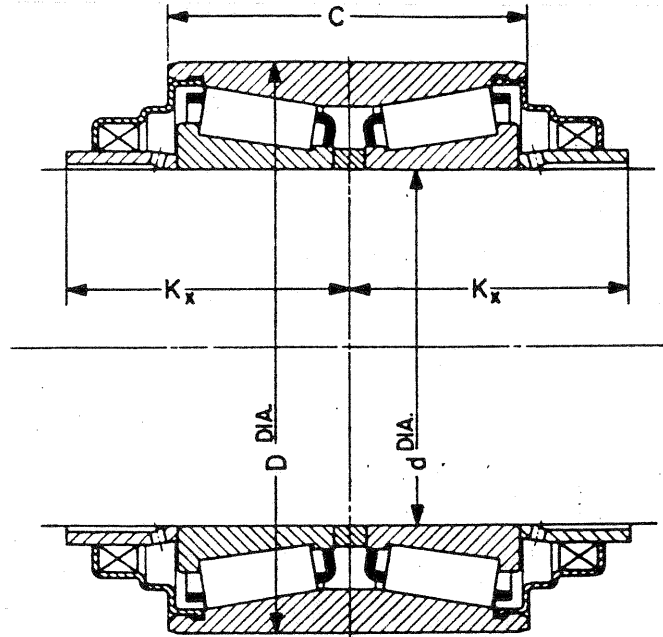


| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | K <sub>t</sub> | C              | a <sub>a</sub> |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|----------------|
| B (4 1/4 x 8)  | HM120848<br>90014 | 4.0000<br>101,600 | 6.5000<br>165,100  | 3 19/32<br>91  | 4 1/2<br>114   | 2.14<br>54,4   |
| C (5 x 9)      | HM124646<br>90056 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 9/32<br>109  | 5 5/8<br>143   | 4.16<br>105,7  |
|                | †                 | 4.6875<br>119,062 | 7.6772<br>195,000  | 4 1/16<br>103  | 5 11/64<br>132 | 3.71<br>94,1   |
| D (5 1/2 x 10) | HM127446<br>90048 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 15/32<br>114 | 6<br>152       | 4.60<br>116,8  |
|                | †                 | 5.1875<br>131,762 | 8.2677<br>210,000  | 4 1/16<br>103  | 5 13/64<br>132 | 3.80<br>96,4   |
| E (6 x 11)     | HM129848<br>90054 | 5.6875<br>144,462 | 8.6875<br>220,662  | 4 3/4<br>121   | 6 7/16<br>164  | 5.02<br>127,5  |
|                | †                 | 5.6875<br>144,462 | 8.6614<br>220,000  | 4 9/32<br>109  | 5 33/64<br>140 | 4.09<br>104,0  |
| F (6 1/2 x 12) | HM133444<br>90076 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 3/8<br>137   | 7 1/4<br>184   | 5.64<br>143,3  |
|                | †                 | 6.1875<br>157,162 | 9.8425<br>250,000  | 4 29/32<br>125 | 6 19/64<br>160 | 4.69<br>119,1  |
| G (7 x 14)     | HM136948<br>90082 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 7 5/16<br>186  | 5.70<br>144,8  |
| GG (7)         | H337846<br>90120  | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 1/2<br>140   | 7 3/4<br>197   | 6.10<br>154,9  |
| K (8)          | M241547<br>90028  | 8.0000<br>203,200 | 11.8750<br>301,625 | 4 1/4<br>108   | 5 33/64<br>140 | 4.56<br>115,7  |

†SP Cup - "D" Dimension shown is maximum.

# Style 4-A

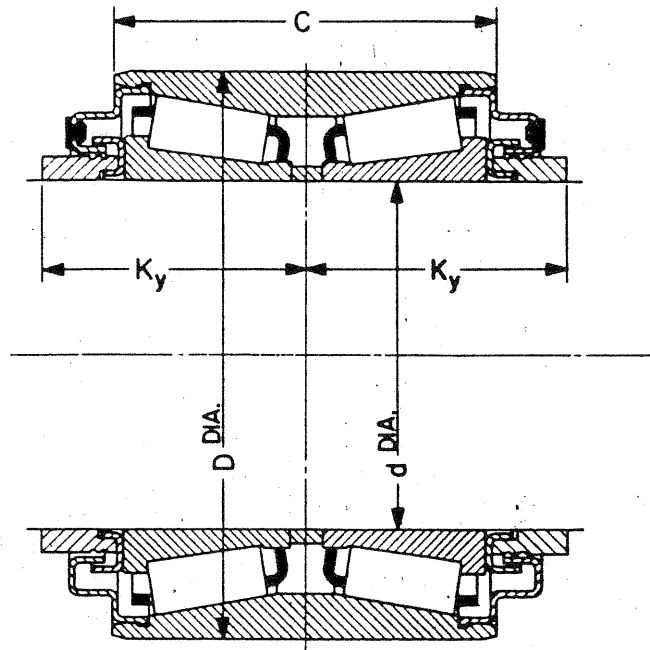
NOTE:  
PART ADJACENT TO SEAL WEAR RING, ON  
END OPPOSITE LUBRICANT FITTING, TO  
BE SLOTTED FOR VENTING PURPOSES.



| CLASS  | ASSEMBLY NUMBER | d*                | D*                | C              | $K_x$          |
|--------|-----------------|-------------------|-------------------|----------------|----------------|
| SP 120 |                 | 4.7237<br>119,982 | 7.6772<br>195,000 | 5 11/64<br>132 | 4 1/16<br>103  |
| SP130  |                 | 5.1178<br>129,992 | 8.2677<br>210,000 | 5 13/64<br>132 | 4 1/16<br>103  |
| SP140  |                 | 5.5115<br>139,992 | 8.6614<br>220,000 | 5 33/64<br>140 | 4 9/32<br>109  |
| SP150  |                 | 5.9052<br>149,992 | 9.8425<br>250,000 | 6 19/64<br>160 | 4 29/32<br>125 |

\*Dimension shown is maximum value. See pages 36 and 37 for complete fitting practice information.

# Style 4-B

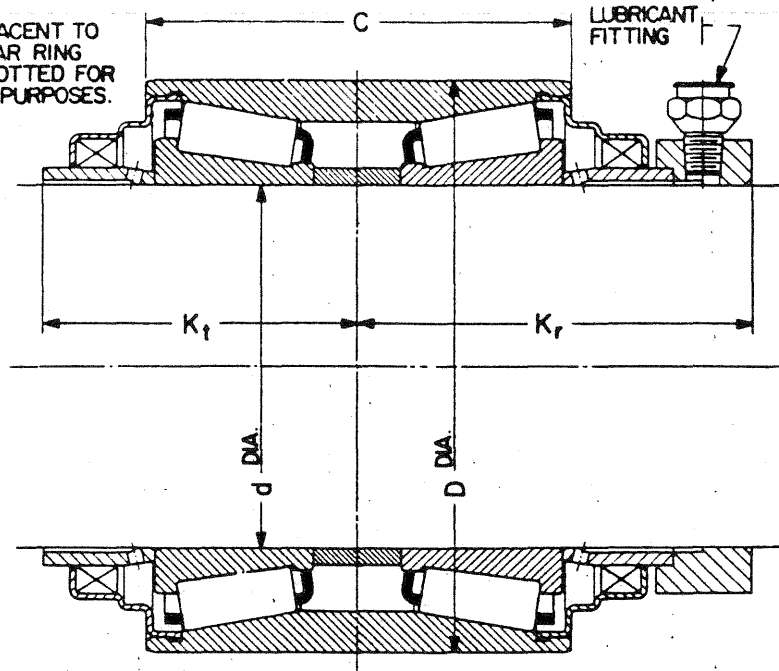


| CLASS | ASSEMBLY NUMBER | d*                | D*                | C              | K <sub>y</sub> |
|-------|-----------------|-------------------|-------------------|----------------|----------------|
| SP120 |                 | 4.7237<br>119,982 | 7.6772<br>195,000 | 5 11/64<br>132 | 3 35/64<br>90  |
| SP130 |                 | 5.1178<br>129,992 | 8.2677<br>210,000 | 5 13/64<br>132 | 3 35/64<br>90  |
| SP140 |                 | 5.5115<br>139,992 | 8.6614<br>220,000 | 5 33/64<br>140 | 3 47/64<br>95  |
| SP150 |                 | 5.9052<br>149,992 | 9.8425<br>250,000 | 6 19/64<br>160 | 4 9/64<br>105  |

\*Dimension shown is maximum value. See pages 36 and 37 for complete fitting practice information.

# Style 5

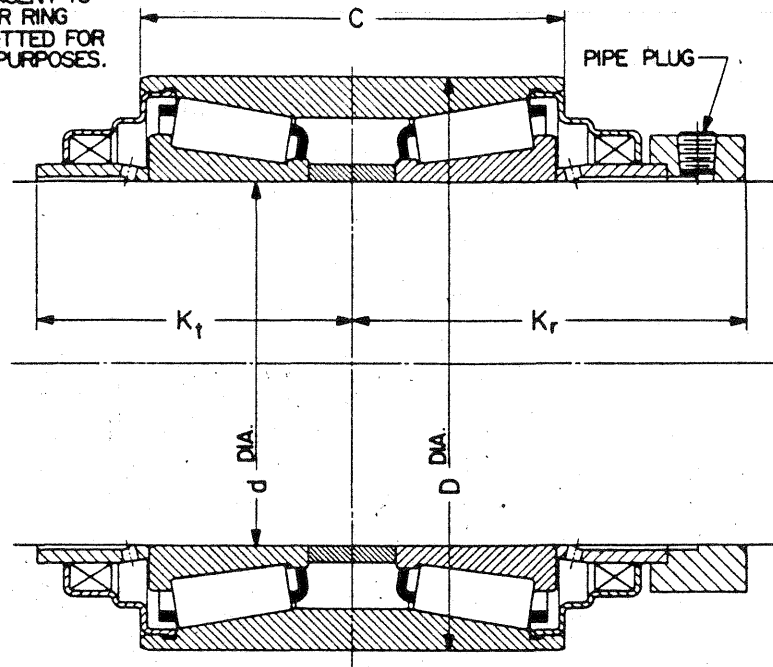
NOTE:  
PART ADJACENT TO  
SEAL WEAR RING  
TO BE SLOTTED FOR  
VENTING PURPOSES.



| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $K_t$          | $K_r$          | C             |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|
| B (4 1/4 x 8)  | HM120848<br>90074 | 4.0000<br>101,600 | 6.5000<br>165,100  | 3 19/32<br>91  | 4 23/32<br>120 | 4 1/2<br>114  |
| C (5 x 9)      | HM124646<br>90108 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 9/32<br>109  | 5 13/32<br>137 | 5 5/8<br>143  |
| D (5 1/2 x 10) | HM127446<br>90168 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 15/32<br>114 | 5 19/32<br>142 | 6<br>152      |
| E (6 x 11)     | HM129848<br>90154 | 5.6875<br>144,462 | 8.6875<br>220,662  | 4 3/4<br>121   | 5 7/8<br>149   | 6 7/16<br>164 |
| F (6 1/2 x 12) | HM133444<br>90184 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 3/8<br>137   | 6 1/2<br>165   | 7 1/4<br>184  |
| G (7 x 14)     | HM136948<br>90138 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 6 7/16<br>164  | 7 5/16<br>186 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 1/2<br>140   | 6 5/8<br>168   | 7 3/4<br>197  |

# Style 5-A

NOTE:  
PART ADJACENT TO  
SEAL WEAR RING  
TO BE SLOTTED FOR  
VENTING PURPOSES.

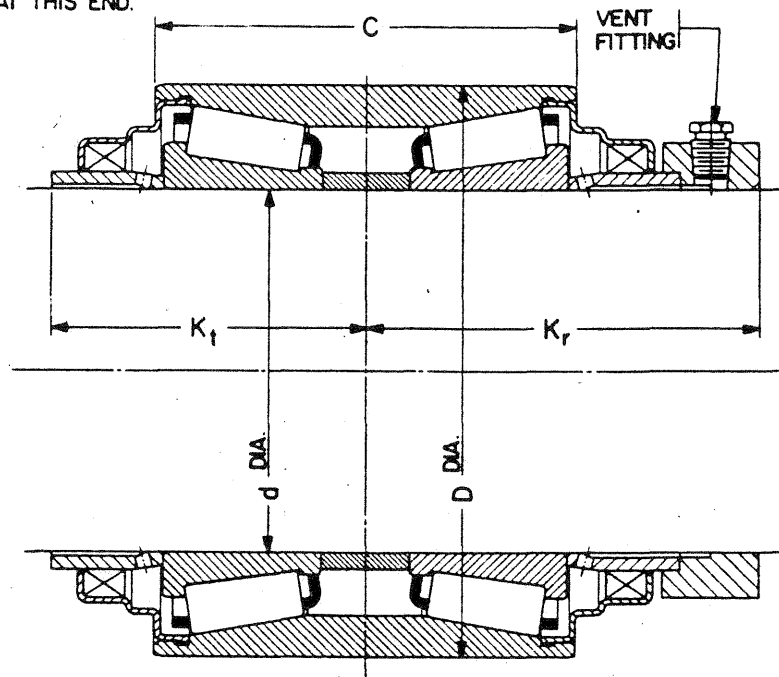


| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | $K_t$          | $K_r$          | C             |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|
| B (4 1/4 x 8)  | HM120848<br>90088 | 4.0000<br>101,600 | 6.5000<br>165,100  | 3 19/32<br>91  | 4 23/32<br>120 | 4 1/2<br>114  |
| C (5 x 9)      | HM124646<br>90084 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 9/32<br>109  | 5 13/32<br>137 | 5 5/8<br>143  |
| D (5 1/2 x 10) | HM127446<br>90114 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 15/32<br>114 | 5 19/32<br>142 | 6<br>152      |
| E (6 x 11)     | HM129848<br>90120 | 5.6875<br>144,462 | 8.6875<br>220,662  | 4 3/4<br>121   | 5 7/8<br>149   | 6 7/16<br>164 |
| F (6 1/2 x 12) | HM133444<br>90126 | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 3/8<br>137   | 6 1/2<br>165   | 7 1/4<br>184  |
| G (7 x 14)     | HM136948<br>90080 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 6 7/16<br>164  | 7 5/16<br>186 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 1/2<br>140   | 6 5/8<br>168   | 7 3/4<br>197  |



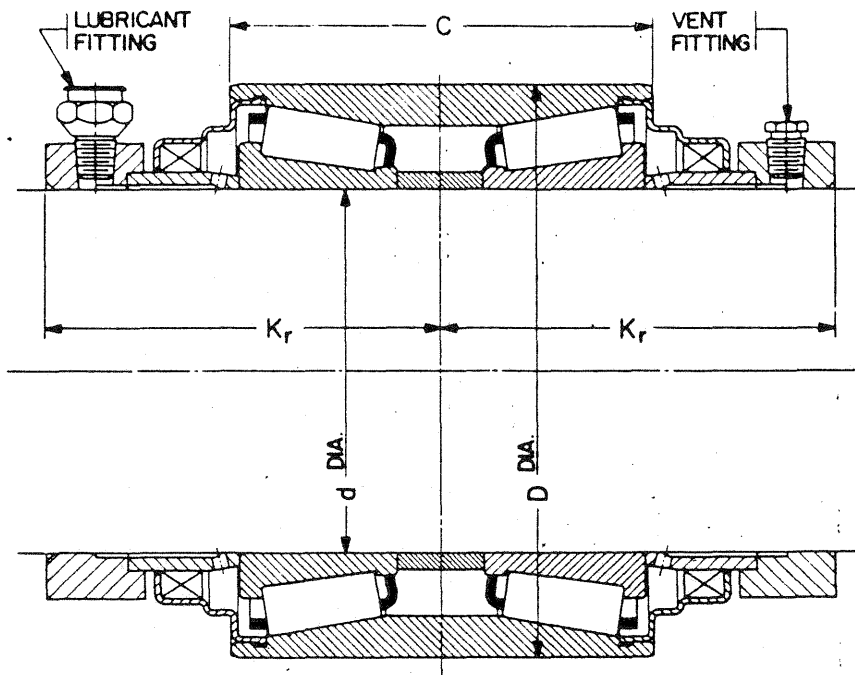
# Style 5-B

NOTE:  
PROVISION FOR LUBRICATION  
OF BEARING UNIT MUST BE  
MADE AT THIS END.



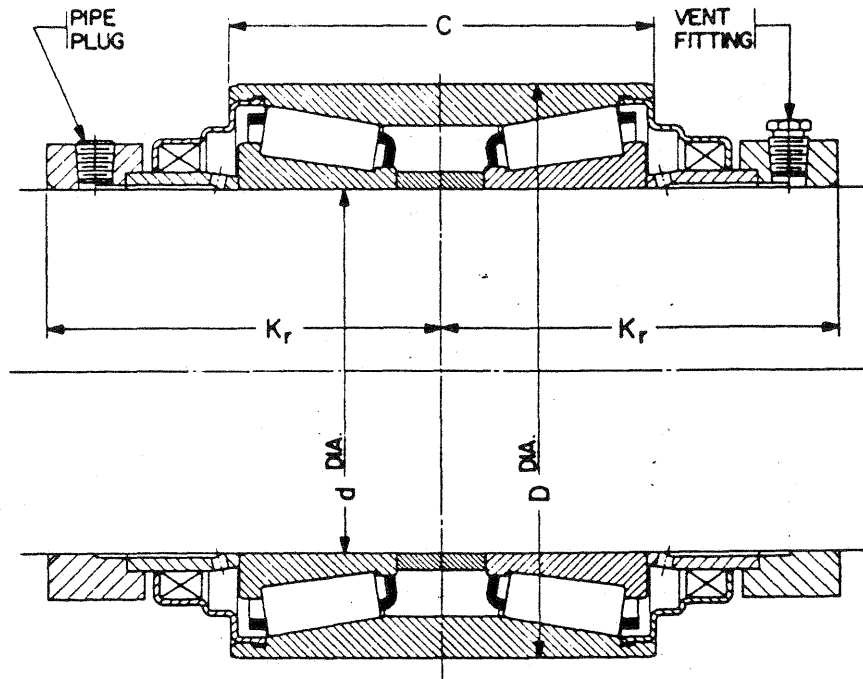
| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | K <sub>t</sub> | K <sub>r</sub> | C             |
|----------------|-------------------|-------------------|--------------------|----------------|----------------|---------------|
| B (4 1/4 x 8)  | HM120848<br>90082 | 4.0000<br>101,600 | 6.5000<br>165,100  | 3 19/32<br>91  | 4 23/32<br>120 | 4 1/2<br>114  |
| C (5 x 9)      | HM124646<br>90092 | 4.6875<br>119,062 | 7.6875<br>195,262  | 4 9/32<br>109  | 5 13/32<br>137 | 5 5/8<br>143  |
| D (5 1/2 x 10) | HM127446<br>90138 | 5.1875<br>131,762 | 8.1875<br>207,962  | 4 15/32<br>114 | 5 19/32<br>142 | 6<br>152      |
| E (6 x 11)     | HM129848<br>90156 | 5.6875<br>144,462 | 8.6875<br>220,662  | 4 3/4<br>121   | 5 7/8<br>149   | 6 7/16<br>164 |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 5 3/8<br>137   | 6 1/2<br>165   | 7 1/4<br>184  |
| G (7 x 14)     | HM136948<br>90150 | 7.0000<br>177,800 | 10.8750<br>276,225 | 5 5/16<br>135  | 6 7/16<br>164  | 7 5/16<br>186 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 5 1/2<br>140   | 6 5/8<br>168   | 7 3/4<br>197  |

# Style 5-C



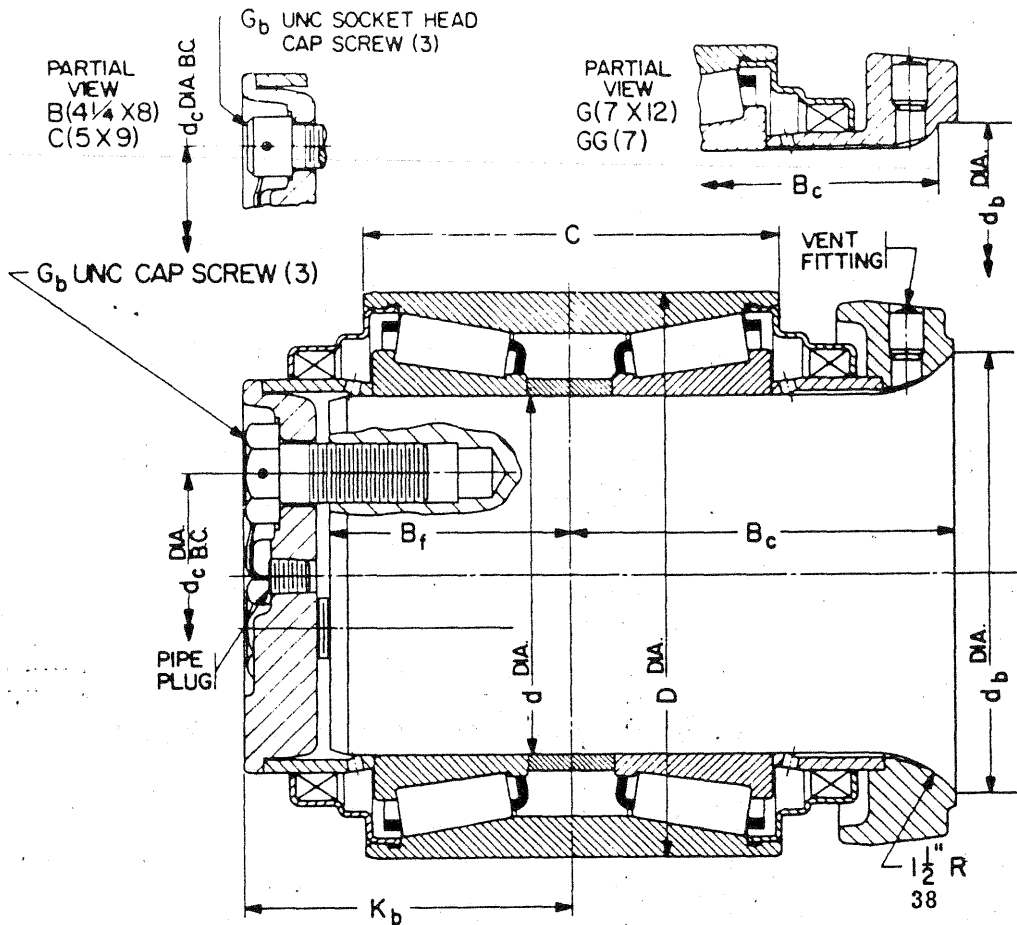
| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | K <sub>r</sub> | C             |
|----------------|-------------------|-------------------|--------------------|----------------|---------------|
| B (4 1/4 x 8)  | HM120848<br>90106 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4 23/32<br>120 | 4 1/2<br>114  |
| C (5 x 9)      | HM124646<br>90090 | 4.6875<br>119,062 | 7.6875<br>195,262  | 5 13/32<br>137 | 5 5/8<br>143  |
| D (5 1/2 x 10) | HM127446<br>90170 | 5.1875<br>131,762 | 8.1875<br>207,962  | 5 19/32<br>142 | 6<br>152      |
| E (6 x 11)     |                   | 5.6875<br>144,462 | 8.6875<br>220,662  | 5 7/8<br>149   | 6 7/16<br>164 |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 6 1/2<br>165   | 7 1/4<br>184  |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 7 5/16<br>186 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 6 5/8<br>168   | 7 3/4<br>197  |

# Style 5-D



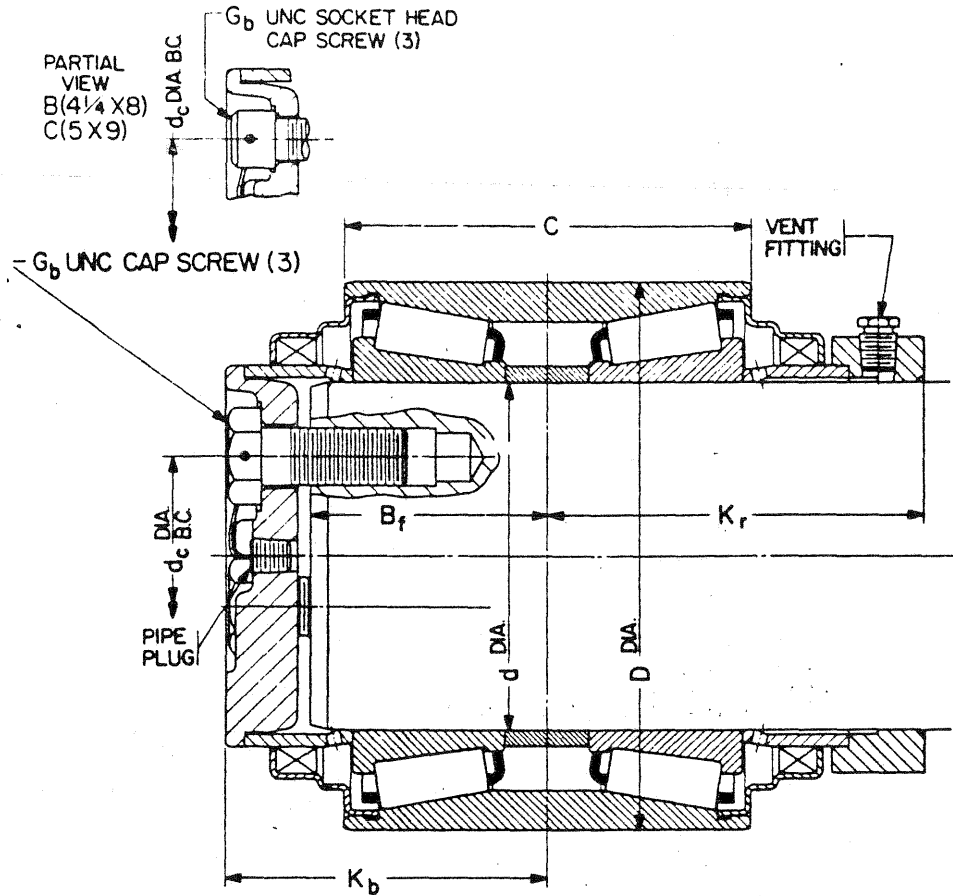
| CLASS          | ASSEMBLY NUMBER   | d                 | D                  | K <sub>r</sub> | C             |
|----------------|-------------------|-------------------|--------------------|----------------|---------------|
| B (4 1/4 x 8)  | HM120848<br>90084 | 4.0000<br>101,600 | 6.5000<br>165,100  | 4 23/32<br>120 | 4 1/2<br>114  |
| C (5 x 9)      |                   | 4.6875<br>119,062 | 7.6875<br>195,262  | 5 13/32<br>137 | 5 5/8<br>143  |
| D (5 1/2 x 10) | HM127446<br>90166 | 5.1875<br>131,762 | 8.1875<br>207,962  | 5 19/32<br>142 | 6<br>152      |
| E (6 x 11)     | HM129848<br>90122 | 5.6875<br>144,462 | 8.6875<br>220,662  | 5 7/8<br>149   | 6 7/16<br>164 |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 6 1/2<br>165   | 7 1/4<br>184  |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 6 7/16<br>164  | 7 5/16<br>186 |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 6 5/8<br>168   | 7 3/4<br>197  |

# Style 6



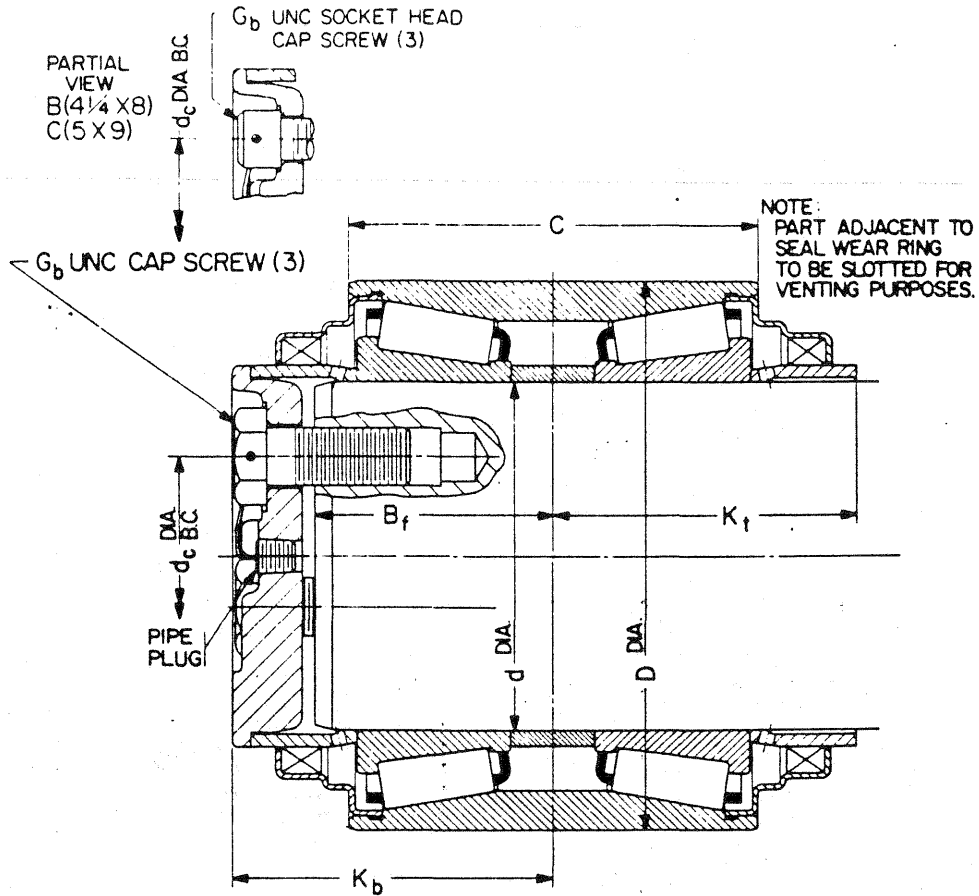
| CLASS        | ASSEMBLY NUMBER   | d                 | D                  | B <sub>f</sub> | B <sub>c</sub> | K <sub>b</sub> (max) | C             | d <sub>b</sub>  | G <sub>b</sub> | d <sub>c</sub> |
|--------------|-------------------|-------------------|--------------------|----------------|----------------|----------------------|---------------|-----------------|----------------|----------------|
| (4 1/4 x 8)  | HM120848<br>90065 | 4.0000<br>101,600 | 6.5000<br>165,100  | 2 11/16<br>68  | 4 5/8<br>117   | 3 7/8<br>98          | 4 1/2<br>114  | 5<br>127        | 5/8 - 11       | 2 3/8<br>60    |
| (5 x 9)      | HM124646<br>90065 | 4.6875<br>119,062 | 7.6875<br>195,262  | 3 5/16<br>84   | 5 5/16<br>135  | 4 9/16<br>116        | 5 5/8<br>143  | 5 7/8<br>149    | 5/8 - 11       | 3<br>76        |
| (5 1/2 x 10) | HM127446<br>90101 | 5.1875<br>131,762 | 8.1875<br>207,962  | 3 1/2<br>89    | 5 1/2<br>140   | 4 13/16<br>122       | 6<br>152      | 6 3/8<br>162    | 7/8 - 9        | 3<br>76        |
| (6 x 11)     | HM129848<br>90109 | 5.6875<br>144,462 | 8.6875<br>220,662  | 3 5/8<br>92    | 5 15/16<br>151 | 5 3/32<br>129        | 6 7/16<br>164 | 7<br>178        | 1 - 8          | 3 1/4<br>83    |
| (6 1/2 x 12) | HM133444<br>90117 | 6.1875<br>157,162 | 9.9375<br>252,412  | 4 3/16<br>106  | 6 7/16<br>164  | 5 23/32<br>145       | 7 1/4<br>184  | 7 1/2<br>190    | 1 - 8          | 3 1/2<br>89    |
| (7 x 12)     | HM136948<br>90089 | 7.0000<br>177,800 | 10.8750<br>276,225 | 4 1/16<br>103  | 5 15/16<br>151 | 5 21/32<br>144       | 7 5/16<br>186 | 8.000<br>203,20 | 1 1/8 - 7      | 4<br>102       |
| (7 x 14)     | HM136948<br>90109 | 7.0000<br>177,800 | 10.8750<br>276,225 | 4 1/16<br>103  | 6 7/16<br>164  | 5 21/32<br>144       | 7 5/16<br>186 | 8<br>203        | 1 1/8 - 7      | 4<br>102       |
| G (7)        |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 4 1/16<br>103  | 6 1/8<br>156   | 5 27/32<br>148       | 7 3/4<br>197  | 8.000<br>203,20 | 1 1/8 - 7      | 4<br>102       |

# Style 6-A



| CLASS          | ASSEMBLY NUMBER   | $d$               | $D$                | $B_f$         | $K_r$          | $K_b$ (max)    | $C$           | $G_b$     | $d_c$       |
|----------------|-------------------|-------------------|--------------------|---------------|----------------|----------------|---------------|-----------|-------------|
| B (4 1/4 x 8)  | HM120848<br>90081 | 4.0000<br>101,600 | 6.5000<br>165,100  | 2 11/16<br>68 | 4 23/32<br>120 | 3 7/8<br>98    | 4 1/2<br>114  | 5/8 - 11  | 2 3/8<br>60 |
| C (5 x 9)      |                   | 4.6875<br>119,062 | 7.6875<br>195,262  | 3 5/16<br>84  | 5 13/32<br>137 | 4 9/16<br>116  | 5 5/8<br>143  | 5/8 - 11  | 3<br>76     |
| D (5 1/2 x 10) | HM127446<br>90157 | 5.1875<br>131,762 | 8.1875<br>207,962  | 3 1/2<br>89   | 5 19/32<br>142 | 4 13/16<br>122 | 6<br>152      | 7/8 - 9   | 3<br>76     |
| E (6 x 11)     | HM129848<br>90171 | 5.6875<br>144,462 | 8.6875<br>220,662  | 3 5/8<br>92   | 5 7/8<br>149   | 5 3/32<br>129  | 6 7/16<br>164 | 1 - 8     | 3 1/4<br>83 |
| F (6 1/2 x 12) |                   | 6.1875<br>157,162 | 9.9375<br>252,412  | 4 3/16<br>106 | 6 1/2<br>165   | 5 23/32<br>145 | 7 1/4<br>184  | 1 - 8     | 3 1/2<br>89 |
| G (7 x 14)     |                   | 7.0000<br>177,800 | 10.8750<br>276,225 | 4 1/16<br>103 | 6 7/16<br>164  | 5 21/32<br>144 | 7 5/16<br>186 | 1 1/8 - 7 | 4<br>102    |
| GG (7)         |                   | 7.0000<br>177,800 | 11.8780<br>301,701 | 4 1/16<br>103 | 6 5/8<br>168   | 5 27/32<br>148 | 7 3/4<br>197  | 1 1/8 - 7 | 4<br>102    |

# Style 6-B



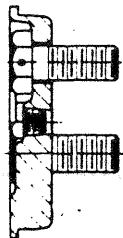
| CLASS          | ASSEMBLY NUMBER     | d                 | D                  | $B_f$         | $K_t$          | $K_b$ (max.)   | C              | $G_b$     | $d_c$       |
|----------------|---------------------|-------------------|--------------------|---------------|----------------|----------------|----------------|-----------|-------------|
| B (4 1/4 x 8)  | HM120848<br>90037   | 4.0000<br>101,600 | 6.5000<br>165,100  | 2 11/16<br>68 | 3 19/32<br>91  | 3 7/8<br>98    | 4 1/2<br>114   | 5/8 - 11  | 2 3/8<br>60 |
| C (5 x 9)      | HM124646<br>90057   | 4.6875<br>119,062 | 7.6875<br>195,262  | 3 5/16<br>84  | 4 9/32<br>109  | 4 9/16<br>116  | 5 5/8<br>143   | 5/8 - 11  | 3<br>76     |
|                | † HM124646<br>90117 | 4.6875<br>119,062 | 7.6772<br>195,000  | 3 3/32<br>79  | 4 1/16<br>103  | 4 11/32<br>110 | 5 11/64<br>132 | 5/8 - 11  | 3<br>76     |
| D (5 1/2 x 10) | HM127446<br>90083   | 5.1875<br>131,762 | 8.1875<br>207,962  | 3 1/2<br>89   | 4 15/32<br>114 | 4 13/16<br>122 | 6<br>152       | 7/8 - 9   | 3<br>76     |
|                | †                   | 5.1875<br>131,762 | 8.2677<br>210,000  | 3 3/32<br>79  | 4 1/16<br>103  | 4 13/32<br>112 | 5 13/64<br>132 | 7/8 - 9   | 3<br>76     |
| E (6 x 11)     | HM129848<br>90101   | 5.6875<br>144,462 | 8.6875<br>220,662  | 3 5/8<br>92   | 4 3/4<br>121   | 5 3/32<br>129  | 6 7/16<br>164  | 1 - 8     | 3 1/4<br>83 |
|                | † HM129848<br>90177 | 5.6875<br>144,462 | 8.6614<br>220,000  | 3 5/32<br>80  | 4 9/32<br>109  | 4 5/8<br>117   | 5 33/64<br>140 | 1 - 8     | 3 1/4<br>83 |
| F (6 1/2 x 12) | HM133444<br>90087   | 6.1875<br>157,162 | 9.9375<br>252,412  | 4 3/16<br>106 | 5 3/8<br>137   | 5 23/32<br>145 | 7 1/4<br>184   | 1 - 8     | 3 1/2<br>89 |
|                | †                   | 6.1875<br>157,162 | 9.8425<br>250,000  | 3 23/32<br>94 | 4 29/32<br>125 | 5 1/4<br>133   | 6 19/64<br>160 | 1 - 8     | 3 1/2<br>89 |
| G (7 x 14)     | HM136948<br>90083   | 7.0000<br>177,800 | 10.8750<br>276,225 | 4 1/16<br>103 | 5 5/16<br>135  | 5 21/32<br>144 | 7 5/16<br>186  | 1 1/8 - 7 | 4<br>102    |
| GG (7)         | HM337846<br>90119   | 7.0000<br>177,800 | 11.8780<br>301,701 | 4 1/16<br>103 | 5 1/2<br>140   | 5 27/32<br>148 | 7 3/4<br>197   | 1 1/8 - 7 | 4<br>102    |
| K (8)          | M241547<br>90029    | 8.0000<br>203,200 | 11.8750<br>301,625 | 3 1/16<br>78  | 4 1/4<br>108   | 4 13/16<br>122 | 5 33/64<br>140 |           |             |

† SP Cup - "D" Dimension shown is maximum.

CLASS B (4 1/4 x 8)  
HM120848-HM120817XD  
TO MAKE THE FOLLOWING STYLES, ADD PARTS  
UNDER THE STYLE REQUIRED TO BASIC STYLE 4

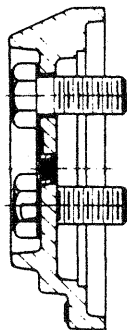
| BASIC STYLE 4  | STD. CUP O. D. | 0.001" O. D. CUP<br>0.03mm |
|--|----------------|----------------------------|
| HM120848   | 90014          | 90078                      |
| Style 1  | 90023          |                            |
| Add:<br>(1) Axle End Cap - K86877-90012<br>(1) Backing Ring - K86874-90010                             |                |                            |
| Style 1A   | 90011          | 90059                      |
| Add:<br>(1) Axle End Cap - K86877-90010<br>(1) Backing Ring - K86874-90010                             |                |                            |
| Style 2  | 90012          | 90060                      |
| Add:<br>(1) Backing Ring - K86874-90010  |                |                            |
| Style 2A   | 90080          |                            |
| Add:<br>(1) Backing Ring - K86874-90010<br>(1) Backing Spacer - K118891<br>(1) Grease Fitting - K78880 |                |                            |
| Style 2B   | 90086          |                            |
| Add:<br>(1) Backing Ring - K86874-90010<br>(1) Backing Spacer - K118891<br>(1) Pipe Plug - K46462      |                |                            |
| Style 3  | 90091          | 90097                      |
| Add:<br>(1) Axle End Cap - K86877-90012  |                |                            |
| Style 3A   |                | 90099                      |
| Add:<br>(1) Axle End Cap - K86877-90010  |                |                            |
| Style 3B   | 90115          |                            |
| (1) Axle End Cap - K86877-90012<br>(1) Backing Spacer - K118891<br>(1) Vent Fitting - K83093           |                |                            |
| Style 3C   | 90083          |                            |
| Add:<br>(1) Axle End Cap - K86877-90010<br>(1) Backing Spacer - K118891<br>(1) Vent Fitting - K83093   |                |                            |

| BASIC STYLE 4   | STD. CUP O. D. | 0.001" O. D. Cup<br>0.03mm |
|---|----------------|----------------------------|
| HM120848  | 90014          | 90078                      |
| Style 5   | 90074          |                            |
| Add:<br>(1) Backing Spacer - K118891<br>(1) Grease Fitting - K78880                                       |                |                            |
| Style 5A  | 90088          | 90096                      |
| Add:<br>(1) Backing Spacer - K118891<br>(1) Pipe Plug - K46462  |                |                            |
| Style 5B  | 90082          |                            |
| Add:<br>(1) Backing Spacer - K118891<br>(1) Vent Fitting - K83093   |                |                            |
| Style 5C  | 90106          |                            |
| Add:<br>(2) Backing Spacer - K118891<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |                |                            |
| Style 5D  | 90084          | 90096                      |
| Add:<br>(2) Backing Spacer - K118891<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |                |                            |
| Style 6   | 90065          | 90105                      |
| Add:<br>(1) Recessed End Cap - K399069-90010<br>(1) Backing Ring - K86874-90010                           |                |                            |
| Style 6A  | 90081          |                            |
| Add:<br>(1) Recessed End Cap - K399069-90010<br>(1) Backing Spacer - K118891<br>(1) Vent Fitting - K83093 |                |                            |
| Style 6B  | 90037          | 90077                      |
| Add:<br>(1) Recessed End Cap - K399069-90010  |                |                            |



RECESSED END CAP

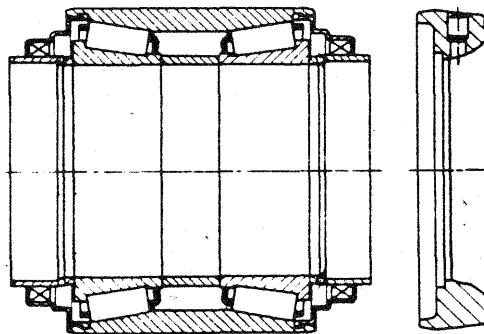
K399069-90010 Consists of:  
(1) K399069 - End Cap  
(3) K344077 - Cap Screws 5/8"  
(1) K75801 - Pipe Plug 1/2"



AXLE END CAP

K86877-90010 Consists of:  
(1) K86877 - End Cap  
(3) K53309 - Cap Screws 3/4"  
(1) K84326 - Lock Plate  
(1) K86891 - Pipe Plug 3/8"

K86877-90012 Consists of:  
(1) K86877 - End Cap  
(3) K53309 - Cap Screws 3/4"  
(1) K84326 - Lock Plate  
(1) K399065 - Lube Fitting 3/8"

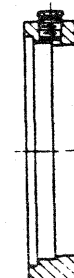


"AP" BEARING BASIC STYLE 4



BACKING RING

K86874-90010 Consists of:  
(1) K86874 - Backing Ring  
(1) K89716 - Vent Fitting



BACKING SPACER

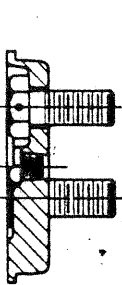
K118891 With one of the following:  
K83093 - Vent Fitting 1/4"  
K46462 - Pipe Plug 1/4"  
K78880 - Grease Fitting 1/4"



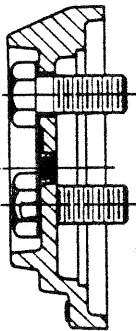
CLASS C (5 x 9)  
 HM124646-HM124618XD  
 TO MAKE THE FOLLOWING STYLES, ADD PARTS  
 UNDER THE STYLE REQUIRED TO BASIC STYLE 4

| BASIC STYLE 4  | STD. CUP O. D. | 0.001" O. D. CUP<br>0.03mm<br>90068 |
|--|----------------|-------------------------------------|
| HM124646   | 90056          |                                     |
| Style 1  | 90047          |                                     |
| Add:<br>(1) Axle End Cap - K86003-90015<br>(1) Backing Ring - K85588-90010                             |                |                                     |
| Style 1A   | 90013          |                                     |
| Add:<br>(1) Axle End Cap - K86003-90010<br>(1) Backing Ring - K85588-90010                             |                |                                     |
| Style 2  | 90014          |                                     |
| Add:<br>(1) Backing Ring - K85588-90010  |                |                                     |
| Style 2A   | 90086          | 90098                               |
| Add:<br>(1) Backing Ring - K85588-90010<br>(1) Backing Spacer - K102198<br>(1) Grease Fitting - K78880 |                |                                     |
| Style 2B   | 90078          |                                     |
| Add:<br>(1) Backing Ring - K85588-90010<br>(1) Backing Spacer - K120198<br>(1) Pipe Plug - K46462      |                |                                     |
| Style 3  | 90085          |                                     |
| Add:<br>(1) Axle End Cap - K86003-90015  |                |                                     |
| Style 3A   | 90083          |                                     |
| Add:<br>(1) Axle End Cap - K86003-90010  |                |                                     |
| Style 3B   | 90089          |                                     |
| Add:<br>(1) Axle End Cap - K86003-90015<br>(1) Backing Spacer - K120198<br>(1) Vent Fitting - K83093   |                |                                     |
| Style 3C   |                |                                     |
| Add:<br>(1) Axle End Cap - K86003-90015<br>(1) Backing Spacer - K120198<br>(1) Vent Fitting - K83093   |                |                                     |

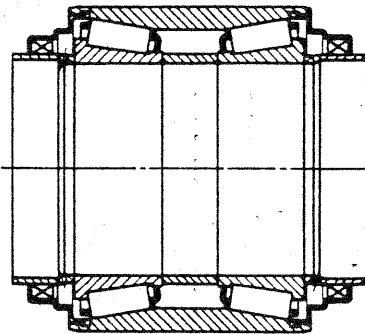
| BASIC STYLE 4   | STD. CUP O. D. | 0.001" O. D. CUP<br>0.03mm<br>90068 |
|---|----------------|-------------------------------------|
| HM124646  | 90056          |                                     |
| Style 5   | 90108          |                                     |
| Add:<br>(1) Backing Spacer - K120198<br>(1) Grease Fitting - K78880                                       |                |                                     |
| Style 5A  | 90084          |                                     |
| Add:<br>(1) Backing Spacer - K120198<br>(1) Pipe Plug - K46462  |                |                                     |
| Style 5B  | 90092          |                                     |
| Add:<br>(1) Backing Spacer - K120198<br>(1) Vent Fitting - K83093   |                |                                     |
| Style 5C  | 90090          |                                     |
| Add:<br>(2) Backing Spacer - K210198<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |                |                                     |
| Style 5D  |                |                                     |
| Add:<br>(2) Backing Spacer - K120198<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |                |                                     |
| Style 6   | 90065          |                                     |
| Add:<br>(1) Recessed End Cap - K399070-90010<br>(1) Backing Ring - K85588-90010                           |                |                                     |
| Style 6A  |                |                                     |
| Add:<br>(1) Recessed End Cap - K399070-90010<br>(1) Backing Spacer - K120198<br>(1) Vent Fitting - K83093 |                |                                     |
| Style 6B  | 90057          | 90069                               |
| Add:<br>(1) Recessed End Cap - K399070-90010  |                |                                     |



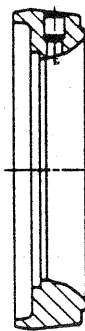
RECESSED END CAP



AXLE END CAP



"AP" BEARING BASIC STYLE 4



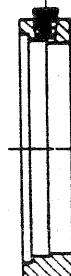
BACKING RING

K85588-90010 Consists of:  
 (1) K85588 - Backing Ring  
 (1) K89716 - Vent Fitting

K399070-90010 Consists of:  
 (1) K399070 - End Cap  
 (3) K344077 - Cap Screws 5/8"  
 (1) K75801 - Pipe Plug 1/2"

K86003-90010 Consists of:  
 (1) K86003 - End Cap  
 (3) K44434 - Cap Screws 7/8"  
 (1) K84325 - Lock Plate  
 (1) K86891 - Pipe Plug 3/8"

K86003-90015 Consists of:  
 (1) K86003 - End Cap  
 (3) K44434 - Cap Screws 7/8"  
 (1) K84325 - Lock Plate  
 (1) K398065 - Lube Fitting 3/8"



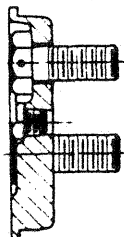
BACKING SPACER

K120198 with one of the following:  
 K83093 - Vent Fitting 1/4"  
 K46462 - Pipe Plug 1/4"  
 K78880 - Grease Fitting 1/4"

CLASS D (5 1/2 x 10)  
 HM127446-HM127415XD  
 TO MAKE THE FOLLOWING STYLES, ADD PARTS  
 UNDER THE STYLE REQUIRED TO BASIC STYLE 4

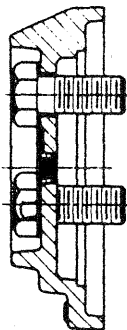
| BASIC STYLE 4  | STD. CUP O.D. | 0.001" O.D. CUP<br>0.03mm<br>90106 |
|--|---------------|------------------------------------|
| HM127446   | 90048         | 90106                              |
| Style 1  | 90011         |                                    |
| Add:<br>(1) Axle End Cap - K85521-90011<br>(1) Backing Ring - K85525-90010                             |               |                                    |
| Style 1A   | 90013         |                                    |
| Add:<br>(1) Axle End Cap - K85521-90010<br>(1) Backing Ring - K85525-90010                             |               |                                    |
| Style 2  | 90012         | 90098                              |
| Add:<br>(1) Backing Ring - K85525-90010  |               |                                    |
| Style 2A   | 90120         |                                    |
| Add:<br>(1) Backing Ring - K85525-90010<br>(1) Backing Spacer - K120178<br>(1) Grease Fitting - K78880 |               |                                    |
| Style 2B   | 90118         |                                    |
| Add:<br>(1) Backing Ring - K85525-90010<br>(1) Backing Spacer - K120178<br>(1) Pipe Plug - K46462      |               |                                    |
| Style 3  | 90093         |                                    |
| Add:<br>(1) Axle End Cap - K85521-90011  |               |                                    |
| Style 3A   |               | 90107                              |
| Add:<br>(1) Axle End Cap - K85521-90010  |               |                                    |
| Style 3B   | 90167         |                                    |
| Add:<br>(1) Axle End Cap - K85521-90011<br>(1) Backing Spacer - K120178<br>(1) Vent Fitting - K83093   |               |                                    |
| Style 3C   |               |                                    |
| Add:<br>(1) Axle End Cap - K85521-90010<br>(1) Backing Spacer - K120178<br>(1) Vent Fitting - K83093   |               |                                    |

| BASIC STYLE 4   | STD. CUP O.D. | 0.001" O.D. CUP<br>0.03mm<br>90106 |
|---|---------------|------------------------------------|
| HM127446  | 90048         | 90106                              |
| Style 5   | 90168         |                                    |
| Add:<br>(1) Backing Spacer - K120178<br>(1) Grease Fitting - K78880                                       |               |                                    |
| Style 5A  | 90114         |                                    |
| Add:<br>(1) Backing Spacer - K120178<br>(1) Pipe Plug - K46462  |               |                                    |
| Style 5B  | 90138         |                                    |
| Add:<br>(1) Backing Spacer - K120178<br>(1) Vent Fitting - K83093   |               |                                    |
| Style 5C  | 90170         |                                    |
| Add:<br>(2) Backing Spacer - K120178<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |               |                                    |
| Style 5D  | 90166         |                                    |
| Add:<br>(2) Backing Spacer - K120178<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |               |                                    |
| Style 6   | 90101         | 90099                              |
| Add:<br>(1) Recessed End Cap - K399071-90010<br>(1) Backing Ring - K85525-90010                           |               |                                    |
| Style 6A  | 90157         |                                    |
| Add:<br>(1) Recessed End Cap - K399071-90010<br>(1) Backing Spacer - K120178<br>(1) Vent Fitting - K83093 |               |                                    |
| Style 6B  | 90083         |                                    |
| Add:<br>(1) Recessed End Cap - K399071-90010  |               |                                    |



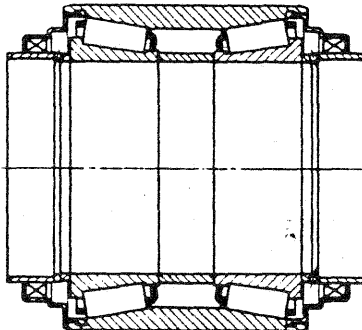
RECESSED END CAP

K399071-90010 Consists of:  
 (1) K399071 - End Cap  
 (3) K33003 - Cap Screw 7/8"  
 (1) K75801 - Pipe Plug 1/2"



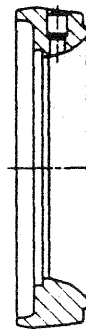
AXLE END CAP

K85521-90010 Consists of:  
 (1) K85521 - End Cap  
 (3) K44434 - Cap Screws 7/8"  
 (1) K80511 - Lock Plate  
 (1) K75801 - Pipe Plug 1/2"



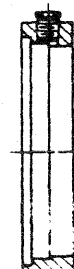
"AP" BEARING BASIC STYLE 4

K85521-90011 Consists of:  
 (1) K85521 - End Cap  
 (3) K44434 - Cap Screws 7/8"  
 (1) K80511 - Lock Plate  
 (1) K49022 - Lube Fitting 1/2"



BACKING RING

K85525-90010 Consists of:  
 (1) K85525 - Backing Ring  
 (1) K89716 - Vent Fitting



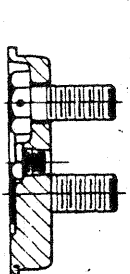
BACKING SPACER

K120178 with one of the following:  
 K83093 - Vent Fitting 1/4"  
 K46462 - Pipe Plug 1/4"  
 K78880 - Grease Fitting 1/4"

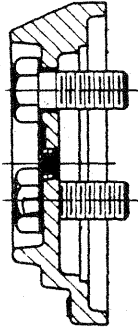
CLASS F (6 x 11)  
HM129848 HM12984XD  
TO MAKE THE FOLLOWING STYLES, ADD PARTS  
UNDER THE STYLE REQUIRED TO BASIC STYLE 4

| SIC STYLE 4   | STD. CUP O.D. | 0.001" O.D. CUP<br>0.03mm<br>90104 |
|---|---------------|------------------------------------|
| HM129848  | 90054         | 90104                              |
| Style 1   | 90011         | 90125                              |
| i:<br>) Axle End Cap - K85510-90011<br>) Backing Ring - K85095-90010                            |               |                                    |
| Style 1A  | 90013         |                                    |
| d:<br>) Axle End Cap - K85510-90010<br>) Backing Ring - K85095-90010                            |               |                                    |
| Style 2   | 90012         | 90114                              |
| d:<br>) Backing Ring - K85095-90010   |               |                                    |
| Style 2A  | 90142         |                                    |
| kd:<br>) Backing Ring - K85095-90010<br>) Backing Spacer - K120190<br>) Grease Fitting - K78880 |               |                                    |
| Style 2B  | 90126         |                                    |
| dd:<br>) Backing Ring - K85095-90010<br>) Backing Spacer - K120190<br>) Pipe Plug - K46462      |               |                                    |
| Style 3   | 90169         | 90105                              |
| dd:<br>) Axle End Cap - K85510-90011  |               |                                    |
| Style 3A  |               |                                    |
| dd:<br>) Axle End Cap - K85510-90010  |               |                                    |
| Style 3B  | 90155         |                                    |
| idd:<br>) Axle End Cap - K85510-90011<br>) Backing Spacer - K120190<br>) Vent Fitting - K83093  |               |                                    |
| Style 3C  |               |                                    |
| Add:<br>) Axle End Cap - K85510-90010<br>) Backing Spacer - K120190<br>) Vent Fitting - K83093  |               |                                    |

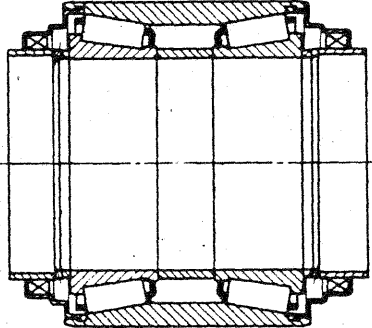
| BASIC STYLE 4   | STD. CUP O.D. | 0.001" O.D. CUP<br>0.03 mm<br>90104 |
|---|---------------|-------------------------------------|
| HM129848  | 90054         | 90104                               |
| Style 5   | 90154         |                                     |
| Add:<br>(1) Backing Spacer - K120190<br>(1) Grease Fitting - K78880                                       |               |                                     |
| Style 5A  | 90120         |                                     |
| Add:<br>(1) Backing Spacer - K120190<br>(1) Pipe Plug - K46462  |               |                                     |
| Style 5B  | 90156         |                                     |
| Add:<br>(1) Backing Spacer - K120190<br>(1) Vent Fitting - K83093   |               |                                     |
| Style 5C  |               |                                     |
| Add:<br>(2) Backing Spacer - K120190<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |               |                                     |
| Style 5D  | 90122         |                                     |
| Add:<br>(2) Backing Spacer - K120190<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |               |                                     |
| Style 6   | 90109         |                                     |
| Add:<br>(1) Recessed End Cap - K399072-90010<br>(1) Backing Ring - K85095-90010                           |               |                                     |
| Style 6A  | 90171         |                                     |
| Add:<br>(1) Recessed End Cap - K399072-90010<br>(1) Backing Spacer - K120190<br>(1) Vent Fitting - K83093 |               |                                     |
| Style 6B  | 90101         |                                     |
| Add:<br>(1) Recessed End Cap - K399072-90010  |               |                                     |



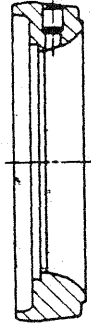
**RECESSED END CAP**  
K399072-90010 Consists of:  
(1) K399072 - End Cap  
(3) K74600 - Cap Screws 1"  
(1) K75801 - Pipe Plug 1/2"



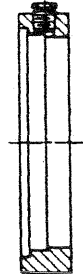
**AXLE END CAP**  
K85510-90010 Consists of:  
(1) K85510 - End Cap  
(3) K84354 - Cap Screws 1"  
(1) K80596 - Lock Plate  
(1) K75801 - Pipe Plug 1/2"



**"AP" BEARING BASIC STYLE 4**  
K85510-90011 Consists of:  
(1) K85510 - End Cap  
(3) K84354 - Cap Screws 1"  
(1) K80596 - Lock Plate  
(1) K49022 - Lube Fitting 1/2"



**BACKING RING**  
K85095-90010 Consists of:  
(1) K85095 - Backing Ring  
(1) K89716 - Vent Fitting

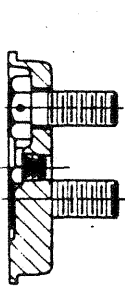


**BACKING SPACER**  
K120190 with one of the following:  
K83093 - Vent Fitting 1/4"  
K46462 - Pipe Plug 1/4"  
K78880 - Grease Fitting 1/4"

CLASS F (6 1/2 x 12)  
 HM133444-HM133446(X1)  
 TO MAKE THE FOLLOWING STYLES, ADD PARTS  
 UNDER THE STYLE REQUIRED TO BASIC STYLE 4

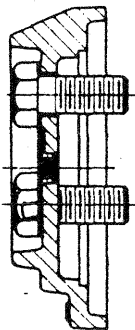
| BASIC STYLE 4  | STD. CUP O. D. | 0.001" O. D. CUP<br>0.03mm<br>90128 |
|--|----------------|-------------------------------------|
| HM133444   | 90076          |                                     |
| Style 1  | 90015          |                                     |
| Add:<br>(1) Axle End Cap - K85517-90012<br>(1) Backing Ring - K85516-90010                             |                |                                     |
| Style 1A   | 90011          |                                     |
| Add:<br>(1) Axle End Cap - K85517-90010<br>(1) Backing Ring - K85516-90010                             |                |                                     |
| Style 2  | 90012          |                                     |
| Add:<br>(1) Backing Ring - K85516-90010  |                |                                     |
| Style 2A   | 90124          |                                     |
| Add:<br>(1) Backing Ring - K85516-90010<br>(1) Backing Spacer - K120160<br>(1) Grease Fitting - K78880 |                |                                     |
| Style 2B   | 90122          |                                     |
| Add:<br>(1) Backing Ring - K85516-90010<br>(1) Backing Spacer - K120160<br>(1) Pipe Plug - K46462      |                |                                     |
| Style 3  | 90107          | 90175                               |
| Add:<br>(1) Axle End Cap - K85517-90012  |                |                                     |
| Style 3A   |                | 90141                               |
| Add:<br>(1) Axle End Cap - K85517-90010  |                |                                     |
| Style 3B   |                |                                     |
| Add:<br>(1) Axle End Cap - K85517-90012<br>(1) Backing Spacer - K120160<br>(1) Vent Fitting - K83093   |                |                                     |
| Style 3C   |                |                                     |
| Add:<br>(1) Axle End Cap - K85517-90010<br>(1) Backing Spacer - K120160<br>(1) Vent Fitting - K83093   |                |                                     |

| BASIC STYLE 4   | STD. CUP O. D. | 0.001" O. D. CUP<br>0.03mm<br>90128 |
|---|----------------|-------------------------------------|
| HM133444  | 90076          |                                     |
| Style 5   | 90184          |                                     |
| Add:<br>(1) Backing Spacer - K120160<br>(1) Grease Fitting - K78880                                       |                |                                     |
| Style 5A  | 90126          |                                     |
| Add:<br>(1) Backing Spacer - K120160<br>(1) Pipe Plug - K46462  |                |                                     |
| Style 5B  |                |                                     |
| Add:<br>(1) Backing Spacer - K120160<br>(1) Vent Fitting - K83093   |                |                                     |
| Style 5C  |                |                                     |
| Add:<br>(2) Backing Spacer - K120160<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |                |                                     |
| Style 5D  |                |                                     |
| Add:<br>(2) Backing Spacer - K120160<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |                |                                     |
| Style 6   | 90117          |                                     |
| Add:<br>(1) Recessed End Cap - K399073-90010<br>(1) Backing Ring - K85516-90010                           |                |                                     |
| Style 6A  |                |                                     |
| Add:<br>(1) Recessed End Cap - K399073-90010<br>(1) Backing Spacer - K120160<br>(1) Vent Fitting - K83093 |                |                                     |
| Style 6B  | 90087          |                                     |
| Add:<br>(1) Recessed End Cap - K399073-90010  |                |                                     |



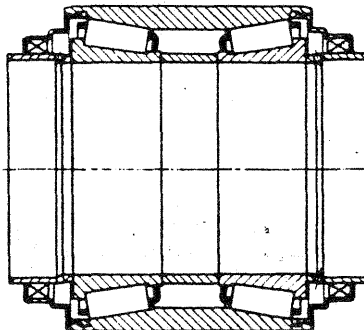
RECESSED END CAP

K399073-90010 Consists of:  
 (1) K399073 - End Cap  
 (3) K74600 - Cap Screws 1"  
 (1) K75801 - Pipe Plug 1/2"



AXLE END CAP

K85517-90010 Consists of:  
 (1) K85517 - End Cap  
 (3) K84351 - Cap Screws 1 1/8"  
 (1) K84324 - Lock Plate  
 (1) K75801 - Pipe Plug 1/2"



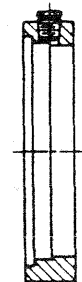
"AP" BEARING BASIC STYLE 4

K85517-90012 Consists of:  
 (1) K85517 - End Cap  
 (3) K84351 - Cap Screws 1 1/2"  
 (1) K84324 - Lock Plate  
 (1) K49022 - Lube Fitting 1/2"



BACKING RING

K85516-90010 Consists of:  
 (1) K85516 - Backing Ring  
 (1) K89716 - Vent Fitting



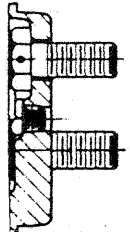
BACKING SPACER

K120160 with one of the following:  
 K83093 - Vent Fitting 1/4"  
 K46462 - Pipe Plug 1/4"  
 K78880 - Grease Fitting 1/4"

CLASS G (7 x 14)  
 HM136948-HM136948XD  
 TO MAKE THE FOLLOWING STYLES, ADD PARTS  
 UNDER THE STYLE REQUIRED TO BASIC STYLE 4

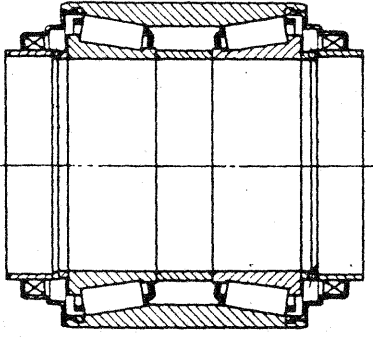
| BASIC STYLE 4  | STD. CUP O.D. | 0.001" O.D. CUP<br>0,03mm<br>90098 |
|--|---------------|------------------------------------|
| HM136948   | 90082         |                                    |
| Style 1  | 90093         |                                    |
| Add:<br>(1) Axle End Cap - K412057-90011<br>(1) Backing Ring - K95200-90010                            |               |                                    |
| Style 1A   | 90085         |                                    |
| Add:<br>(1) Axle End Cap - K412057-90010<br>(1) Backing Ring - K95200-90010                            |               |                                    |
| Style 2  | 90012         | 90096                              |
| Add:<br>(1) Backing Ring - K95200-90010  |               |                                    |
| Style 2A   |               |                                    |
| Add:<br>(1) Backing Ring - K95200-90010<br>(1) Backing Spacer - K118866<br>(1) Grease Fitting - K78880 |               |                                    |
| Style 2B   | 90108         |                                    |
| Add:<br>(1) Backing Ring - K95200-90010<br>(1) Backing Spacer - K118866<br>(1) Pipe Plug - K46462      |               |                                    |
| Style 3  | 90137         |                                    |
| Add:<br>(1) Axle End Cap - K412057-90011   |               |                                    |
| Style 3A   |               | 90107                              |
| Add:<br>(1) Axle End Cap - K412057-90010   |               |                                    |
| Style 3B   | 90149         |                                    |
| Add:<br>(1) Axle End Cap - K412057-90011<br>(1) Backing Spacer - K118866<br>(1) Vent Fitting - K83093  |               |                                    |
| Style 3C   |               |                                    |
| Add:<br>(1) Axle End Cap - K417057-90010<br>(1) Backing Spacer - K118866<br>(1) Vent Fitting - K83093  |               |                                    |

| BASIC STYLE 4   | STD. CUP O.D. | 0.001" O.D. CUP<br>0,03mm<br>90098 |
|---|---------------|------------------------------------|
| HM136948  | 90082         |                                    |
| Style 5   | 90138         |                                    |
| Add:<br>(1) Backing Spacer - K118866<br>(1) Grease Fitting - K78880                                       |               |                                    |
| Style 5A  | 90080         |                                    |
| Add:<br>(1) Backing Spacer - K118866<br>(1) Pipe Plug - K46462  |               |                                    |
| Style 5B  | 90150         |                                    |
| Add:<br>(1) Backing Spacer - K118866<br>(1) Vent Fitting - K83093   |               |                                    |
| Style 5C  |               |                                    |
| Add:<br>(2) Backing Spacer - K118866<br>(1) Grease Fitting - K78880<br>(1) Vent Fitting - K83093          |               |                                    |
| Style 5D  |               |                                    |
| Add:<br>(2) Backing Spacer - K118866<br>(1) Pipe Plug - K46462<br>(1) Vent Fitting - K83093               |               |                                    |
| Style 6   | 90109         | 90095                              |
| Add:<br>(1) Recessed End Cap - K399074-90010<br>(1) Backing Ring - K95200-90010                           |               |                                    |
| Style 6A  |               |                                    |
| Add:<br>(1) Recessed End Cap - K399074-90010<br>(1) Backing Spacer - K118866<br>(1) Vent Fitting - K83093 |               |                                    |
| Style 6B  | 90083         |                                    |
| Add:<br>(1) Recessed End Cap - K399074-90010  |               |                                    |

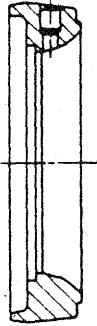


RECESSED END CAP

- K399074-90010 Consists of:  
 (1) K399074 - End Cap  
 (3) K74588 - Cap Screws 1 1/8"  
 (1) K75801 - Pipe Plug 1/2"



"AP" BEARING BASIC STYLE 4



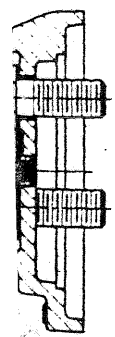
BACKING RING  
G (7 x 14)

- K95200-90010 Consists of:  
 K95200 - Backing Ring  
 K89716 - Vent Fitting



BACKING RING  
G (7 x 12)

- K83160-90010 Consists of:  
 K83160 - Backing Ring  
 K89716 - Vent Fitting

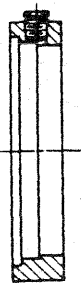


AXLE END CAP  
G (7 x 14)

- K412057-90010 Consists of:  
 (1) K412057 - End Cap  
 (3) K84398 - Cap Screws 1 1/4"  
 (1) K84701 - Lock Plate  
 (1) K75801 - Pipe Plug 1/2"
- K412057-90011 Consists of:  
 (1) K412057 - End Cap  
 (3) K84398 - Cap Screws 1 1/4"  
 (1) K84701 - Lock Plate  
 (1) K49022 - Lube Fitting 1/2"

AXLE END CAP  
G (7 x 12)

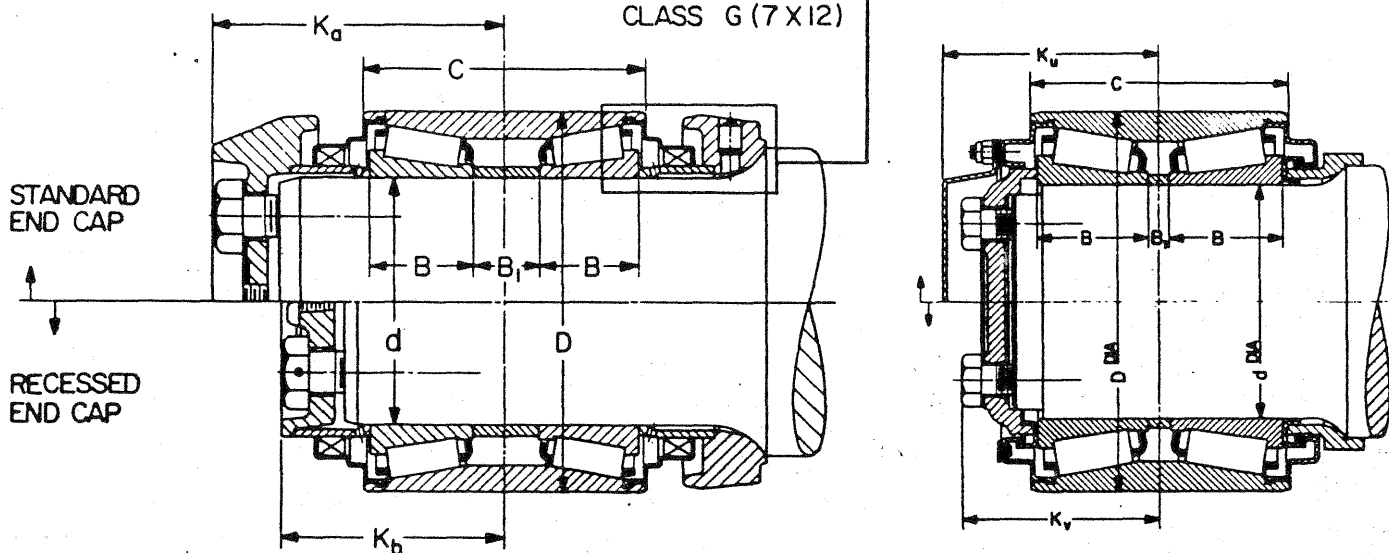
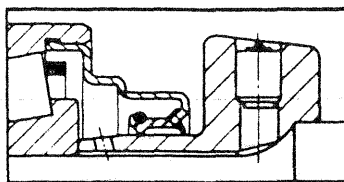
- K95199-90010 Consists of:  
 (1) K95199 - End Cap  
 (3) K84398 - Cap Screws 1 1/4"  
 (1) K84701 - Lock Plate  
 (1) K75801 - Pipe Plug 1/2"
- K95199-90011 Consists of:  
 (1) K95199 - End Cap  
 (3) K84398 - Cap Screws 1 1/4"  
 (1) K84701 - Lock Plate  
 (1) K49022 - Lube Fitting 1/2"



BACKING SPACER

- K118866 with one of the following:  
 K83093 - Vent Fitting 1/4"  
 K46462 - Pipe Plug 1/4"  
 K78880 - Grease Fitting 1/4"

# Overall Dimensions for Standard & Recessed End Caps & "SP" Bearings



| Class          | Bearing Part No. |            | Cone Bore<br>d      | Cup O.D.<br>D         | Cup Width<br>C   | K <sub>a</sub> | K <sub>b</sub> | K <sub>u</sub> | K <sub>v</sub> | B               | B <sub>1</sub> | Rating @ 500 RPM<br>For 3000 hr L <sub>10</sub> |                     | Factor<br>K |
|----------------|------------------|------------|---------------------|-----------------------|------------------|----------------|----------------|----------------|----------------|-----------------|----------------|---|---------------------|-------------|
|                | Cone             | Cup        |                     |                       |                  |                |                |                |                |                 |                | Radial<br>lb<br>daN                             | Thrust<br>lb<br>daN |             |
| B (4-1/4 x 8)  | HM120835         | HM120817XD | • 3.3750<br>85,725  | •• 6.5000<br>165,100  | 4-1/2<br>114     | 5-35/64<br>141 | 3-7/8<br>98    |                |                | 1-15/16<br>49   | 5/16<br>8      | 24300<br>10800                                  | 5800<br>2600        | 2.21        |
|                | HM120848         |            | • 4.0000<br>101,800 |                       |                  |                |                |                |                |                 |                |   |                     |             |
| C (5 x 9)      | HM124648         | HM124618XD | • 4.6875<br>119,062 | •• 7.8875<br>195,262  | 5-5/8<br>143     | 6-3/64<br>154  | 4-9/16<br>116  |                |                | 2-1/4<br>57     | 7/8<br>22      | 35000   | 8300                |             |
| SP120          | HM124649         | HM124618XD | † 4.7237<br>119,982 | †† 7.6772<br>195,000  | 5-11/64<br>131,4 |                |                | 4-21/64<br>110 | 4<br>102       | 2-1/4<br>57,15  | 27/64<br>10,7  | 15500   | 3700                | 2.21        |
| D (5-1/2 x 10) | HM127446         | HM127415XD | • 5.1875<br>131,762 | •• 8.1875<br>207,962  | 6<br>152         | 6-11/64<br>157 | 4-13/16<br>122 |                |                | 2-1/4<br>57,15  | 1-1/4<br>31,75 | 38500   | 9150                |             |
| SP130          | HM127442         | HM127417XD | † 5.1178<br>129,992 | †† 8.2677<br>210,000  | 5-13/64<br>132   |                |                | 4-13/32<br>112 | 4-3/32<br>104  | 2-1/4<br>57,15  | 29/64<br>11,35 | 17150   | 4050                | 2.21        |
| E (6 x 11)     | HM129848         | HM129814XD | • 5.6875<br>144,462 | •• 8.6875<br>220,662  | 6-7/16<br>163    | 6-43/64<br>169 | 5-3/32<br>129  |                |                | 2-5/16<br>59    | 1-1/2<br>38    | 41000   | 9700                |             |
| SP140          | HM129843         | HM129813XD | † 5.5115<br>139,992 | †† 8.6614<br>220,000  | 5-33/64<br>140   |                |                | 4-41/64<br>118 | 4-11/32<br>110 | 2-5/16<br>58,74 | 37/64<br>14,58 | 18250   | 4300                | 2.21        |
| F (6-1/2 x 12) | HM133444         | HM133416XD | • 6.1875<br>157,162 | •• 9.9375<br>252,412  | 7-1/4<br>184     | 7-9/64<br>181  | 5-23/32<br>145 |                |                | 2-3/4<br>70     | 1-1/2<br>38    | 55500   | 13200               |             |
| SP150          | HM133436         | HM133413XD | † 5.9032<br>149,992 | †† 9.8425<br>250,000  | 6-19/64<br>160   |                |                | 5-13/64<br>132 | 4-7/8<br>124   | 2-3/4<br>69,85  | 35/64<br>13,95 | 24700   | 5850                | 2.21        |
| G              | HM136938         | HM136916XD | • 6.1875<br>157,162 | •• 10.8750<br>276,225 | 7-5/16<br>186    | 7-5/64<br>180  | 5-21/32<br>144 |                |                | 2-15/16<br>75   | 1-1/4<br>32    | 64500<br>28700                                  | 15400<br>6850       | 2.21        |
|                | HM136940         |            | • 6.5000<br>165,100 |                       |                  |                |                |                |                |                 |                |   |                     |             |
|                | HM136948         |            | • 7.0000<br>177,800 |                       |                  |                |                |                |                |                 |                |   |                     |             |
| GG             | H337840          | H337816XD  | • 6.5000<br>165,100 | •• 11.8780<br>301,701 | 7-3/4<br>197     | 7-17/64<br>188 |                | 5-27/32<br>148 |                | 3-7/16<br>87    | 5/8<br>16      | 81500<br>36250                                  | 25200<br>11200      | 1.69        |
|                | H337846          |            | • 7.0000<br>177,800 |                       |                  |                |                |                |                |                 |                |   |                     |             |
| K (8)          | M241547          | M241513XD  | • 8.0000<br>203,200 | •• 11.8750<br>301,625 | 5-33/64<br>140   |                |                | 4-13/16<br>122 |                | 2-9/32<br>58    | 3/8<br>10      | 57000<br>23350                                  | 16200<br>7200       | 1.78        |

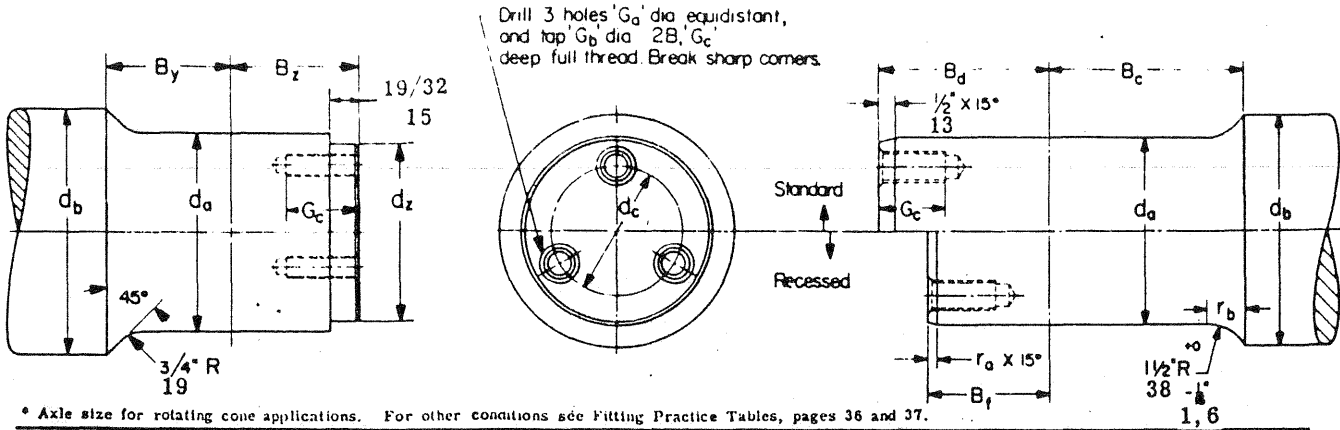
\* Bore tolerance +0.001 -0.000 (+0,025 -0,000)

\*\* Cup O.D. tolerance +0.005 -0.000 (+0,127-0,000)  
[Cup No. H337816XD tolerance -0.005 +0.003 (-0,127 -0,076)]

† Bore tolerance +0.000 -0.001 (+0,000 -0,025)

†† Cup O.D. tolerance +0.000 -0.005 (+0,000 -0,127)

# Axle Details for Standard & Recessed End Caps & "SP" Bearings



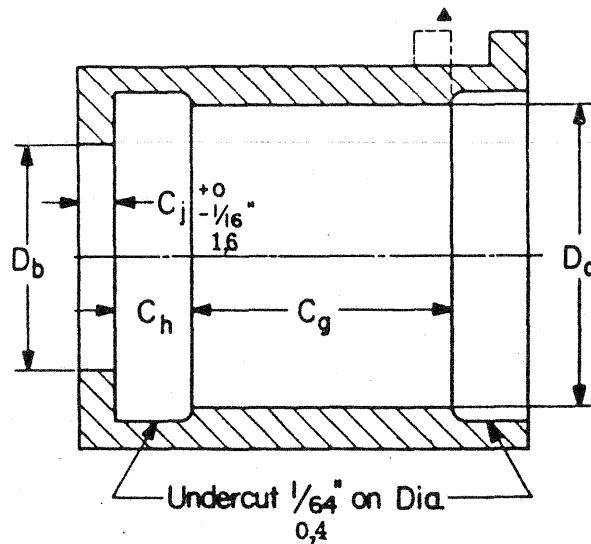
\* Axle size for rotating cone applications. For other conditions see Fitting Practice Tables, pages 36 and 37.

| Class          | d <sub>a</sub>    | d <sub>b</sub>    | B <sub>c</sub> | B <sub>y</sub> | B <sub>z</sub> | r <sub>b</sub> | Standard End Cap |                |                |                |                | Torque<br>lb-ft<br>m - KG  |
|----------------|-------------------|-------------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|----------------|----------------|----------------------------|
|                |                   |                   |                |                |                |                | B <sub>d</sub>   | d <sub>c</sub> | G <sub>a</sub> | G <sub>b</sub> | G <sub>c</sub> |                            |
| B (4-1/4 x 8)  | 3.3790 - 3.3780   | 4-3/8             | 4-5/8          | -              | -              | 1.118          | 4                | 2-1/8          | 17/32          | 5/8-11         | 1-1/2          | 110 - 120                  |
|                | 85,827 - 85,801   | 110               | 117            | -              | -              | 28,40          | 102              | 54             | 13             | 38             | 38             | 15,2 - 16,6                |
| C (5 x 9)      | 4.0040 - 4.0030   | 5                 | 4-5/8          | -              | -              | 1.118          | 4                | 2-7/16         | 21/32          | 3/4-10         | 1-5/8          | 110 - 120                  |
|                | 101,702 - 101,676 | 127               | 117            | -              | -              | 28,40          | 102              | 62             | 17             | 41             | 41             | 15,2 - 16,6                |
| SP120          | 4.6915 - 4.6905   | 5-7/8             | 5-5/16         | -              | -              | 1.195          | 4-7/16           | 3              | 49/64          | 7/8-9          | 1-7/8          | 140 - 150                  |
|                | 119,164 - 119,138 | 149               | 135            | -              | -              | 30,35          | 113              | 76             | 19             | 48             | 48             | 19,4 - 20,7                |
| D (5-1/2 x 10) | 4.7267 - 4.7257   | 5.4395 - 5.4379   | -              | 3-35/64        | 2-61/64        | 1.680          | -                | -              | -              | -              | -              | -                          |
|                | 120,059 - 120,033 | 138,162 - 138,122 | -              | 90             | 75             | 17,28          | -                | -              | -              | -              | -              | -                          |
| SP130          | 5.1915 - 5.1905   | 6-3/8             | 5-1/2          | -              | -              | 1.195          | 4-9/16           | 3-1/2          | 49/64          | 7/8-9          | 1-7/8          | 140 - 150                  |
|                | 131,864 - 131,838 | 162               | 140            | -              | -              | 30,35          | 116              | 89             | 19             | 48             | 48             | 19,4 - 20,7                |
| E (6 x 11)     | 5.1208 - 5.1198   | 5.9124 - 5.9108   | -              | 3-47/64        | 2-61/64        | 1.720          | -                | -              | -              | -              | -              | -                          |
|                | 130,069 - 130,043 | 150,174 - 150,134 | -              | 85             | 75             | 18,28          | -                | -              | -              | -              | -              | -                          |
| SP140          | 5.6915 - 5.6905   | 7                 | 6-15/16        | -              | -              | 1.240          | 5                | 3-7/8          | 7/8            | 1-8            | 2              | 250 - 270                  |
|                | 144,564 - 144,538 | 178               | 151            | -              | -              | 31,50          | 127              | 98             | 22             | 51             | 51             | 34,6 - 37,3                |
| F (6-1/2 x 12) | 5.5145 - 5.5135   | 6,3061 - 6,3045   | -              | 3-15/16        | 3-5/32         | 1.720          | -                | -              | -              | -              | -              | -                          |
|                | 140,069 - 140,043 | 160,174 - 160,134 | -              | 100            | 80             | 18,23          | -                | -              | -              | -              | -              | -                          |
| GG             | 6.1915 - 6.1905   | 7-1/2             | 6-7/16         | -              | -              | 1.240          | 5-5/16           | 4-1/4          | 63/64          | 1-1/8-7        | 2-1/8          | 360 - 390                  |
|                | 157,264 - 157,238 | 190               | 184            | -              | -              | 31,50          | 135              | 106            | 25             | 54             | 54             | 49,8 - 53,9                |
| G              | 5.9082 - 5.9072   | 6,7002 - 6,6986   | -              | 4-9/64         | 3-35/64        | 1.720          | -                | -              | -              | -              | -              | -                          |
|                | 150,069 - 150,043 | 170,186 - 170,146 | -              | 105            | 90             | 18,28          | -                | -              | -              | -              | -              | -                          |
| G              | 6.1915 - 6.1905   | 7-1/2             | 6-3/16         | -              | -              | 1.240          | 5-7/8            | 3-7/8          | 49/64          | 7/8-9          | 1-1/2          | High Strength<br>360 - 390 |
|                | 157,264 - 157,238 | 190               | 157            | -              | -              | 31,50          | 149              | 98             | 19             | 38             | 38             | 49,8 - 53,9                |
| G              | 6.5040 - 6.5030   | 7.906 - 7.905     | 5-15/16        | -              | -              | 1.270          | 5-7/8            | 3-7/8          | 49/64          | 7/8-9          | 1-1/2          | High Strength<br>360 - 390 |
|                | 165,202 - 165,176 | 200,812 - 200,787 | 151            | -              | -              | 32,26          | 149              | 98             | 19             | 38             | 38             | 49,8 - 53,9                |
| G (7 x 12)     | 7.0040 - 7.0030   | 8.002 - 8.000     | 5-15/16        | -              | -              | 1.118          | 5-1/8            | 4-5/8          | 1-7/64         | 1-1/4-7        | 2-1/4          | 430 - 460                  |
|                | 177,902 - 177,876 | 203,251 - 203,200 | 151            | -              | -              | 28,40          | 130              | 117            | 28             | 57             | 57             | 59,4 - 63,6                |
| G (7 x 14)     | 7.0040 - 7.0030   | 8                 | 6-7/16         | -              | -              | 1.118          | 5-1/8            | 4-5/8          | 1-7/64         | 1-1/4-7        | 2-1/4          | 430 - 460                  |
|                | 177,902 - 177,876 | 203               | 164            | -              | -              | 28,40          | 130              | 117            | 28             | 57             | 57             | 59,4 - 63,6                |
| GG             | 6.5040 - 6.5030   | 7.906 - 7.905     | 5-15/16        | -              | -              | 1.270          | 5-7/8            | 5              | 49/64          | 7/8-9          | 1-1/2          | High Strength<br>360 - 390 |
|                | 165,202 - 165,176 | 200,812 - 200,787 | 151            | -              | -              | 32,26          | 149              | 127            | 19             | 38             | 38             | 49,8 - 53,9                |
| K (8)          | 7.0040 - 7.0030   | 8.002 - 8.000     | 6-1/8          | -              | -              | 1.118          | 5-3/16           | 4-3/8          | 1-7/64         | 1-1/4-7        | 2-1/4          | 430 - 460                  |
|                | 177,902 - 177,876 | 203,251 - 203,200 | 156            | -              | -              | 28,40          | 135              | 117            | 28             | 57             | 57             | 59,4 - 63,6                |
| K (8)          | 8.0050 - 8.0040   | 9-1/4             | 5-3/16         | -              | -              | 1.218          | -                | -              | -              | -              | -              | -                          |
|                | 203,327 - 203,301 | 235               | 132            | -              | -              | 30,94          | -                | -              | -              | -              | -              | -                          |

| Class          | Recessed End Cap |                |                |                |                |                | Torque<br>lb-ft<br>m/KG | d <sub>z</sub>    | d <sub>c</sub> | G <sub>a</sub> | G <sub>b</sub> | G <sub>c</sub> | Torque<br>lb-ft<br>m - KG |
|----------------|------------------|----------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|----------------|----------------|----------------|----------------|---------------------------|
|                | B <sub>f</sub>   | r <sub>a</sub> | d <sub>c</sub> | G <sub>a</sub> | G <sub>b</sub> | G <sub>c</sub> |                         |                   |                |                |                |                |                           |
| B (4-1/4 x 8)  | 2-11/16          | 1/4            | 2-3/8          | 17/32          | 5/8-11         | 1-1/2          | 110 - 120               |                   |                |                |                |                |                           |
|                | 68               | 6              | 60             | 13             | 38             | 38             | 15,2 - 16,6             |                   |                |                |                |                |                           |
| C (5 x 9)      | 3-5/16           | 1/4            | 3              | 17/32          | 5/8-11         | 1-1/2          | 110 - 120               |                   |                |                |                |                |                           |
|                | 84               | 6              | 76             | 13             | 38             | 38             | 15,2 - 16,6             |                   |                |                |                |                |                           |
| SP120          |                  |                |                |                |                |                |                         | 4.3260 - 4.3239   | 35/32          | 17/32          | 5/8-11UNC      | 1-3/16         | 60 - 70                   |
|                |                  |                |                |                |                |                |                         | 109,880 - 109,826 | 80             | 13,75          | M16x2-6H       | 30             | 8,3 - 9,6                 |
| D (5-1/2 x 10) | 3-1/2            | 1/4            | 3              | 49/64          | 7/8-9          | 1-7/8          | 140 - 150               |                   |                |                |                |                |                           |
|                | 89               | 6              | 76             | 19             | 48             | 48             | 19,4 - 20,7             |                   |                |                |                |                |                           |
| SP130          |                  |                |                |                |                |                |                         | 4.7197 - 4.7176   | 3-5/32         | 17/32          | 5/8-11UNC      | 1-3/16         | 60 - 70                   |
|                |                  |                |                |                |                |                |                         | 119,890 - 119,826 | 80             | 13,75          | M16x2-6H       | 30             | 8,3 - 9,6                 |
| E (6 x 11)     | 3-5/8            | 1/4            | 3-1/4          | 7/8            | 1-8            | 2              | 250 - 270               |                   |                |                |                |                |                           |
|                | 92               | 6              | 83             | 22             | 51             | 51             | 34,6 - 37,3             |                   |                |                |                |                |                           |
| SP140          |                  |                |                |                |                |                |                         | 5.1124 - 5.1099   | 3-15/16        | 17/32          | 5/8-11UNC      | 1-3/16         | 60 - 70                   |
|                |                  |                |                |                |                |                |                         | 129,885 - 129,792 | 100            | 13,75          | M16x2-6H       | 30             | 8,3 - 9,6                 |
| F (6-1/2 x 12) | 4-3/16           | 1/4            | 3-1/2          | 7/8            | 1-8            | 2              | 250 - 270               |                   |                |                |                |                |                           |
|                | 106              | 6              | 99             | 22             | 51             | 51             | 34,6 - 37,3             |                   |                |                |                |                |                           |
| SP150          |                  |                |                |                |                |                |                         | 5.5061 - 5.5036   | 3-15/16        | 21/32          | 3/4-10UNC      | 1-37/64        | 120 - 140                 |
|                |                  |                |                |                |                |                |                         | 139,855 - 139,792 | 100            | 17,25          | M20x2.5-6H     | 40             | 16,6 - 19,3               |
| G              |                  |                |                |                |                |                |                         |                   |                |                |                |                |                           |
|                |                  |                |                |                |                |                |                         |                   |                |                |                |                |                           |
| G (7 x 12)     | 4-1/16           | 3/16           | 4              | 63/64          | 1-1/8-7        | 2-1/8          | 360 - 390               |                   |                |                |                |                |                           |
|                | 103              | 5              | 102            | 25             | 54             | 54             | 49,8 - 53,9             |                   |                |                |                |                |                           |
| G (7 x 14)     | 4-1/16           | 3/16           | 4              | 63/64          | 1-1/8-7        | 2-1/8          | 360 - 390               |                   |                |                |                |                |                           |
|                | 103              | 5              | 102            | 25             | 54             | 54             | 49,8 - 53,9             |                   |                |                |                |                |                           |
| GG             | 4-1/16           | 3/16           | 4              | 63/64          | 1-1/8-7        | 2-1/8          | 360 - 390               |                   |                |                |                |                |                           |
|                | 103              | 5              | 102            | 25             | 54             | 54             | 49,8 - 53,9             |                   |                |                |                |                |                           |
| K (8)          | 3-1/16           | 3/16           | 4-7/8          | 63/64          | 1-1/8-7        | 2-1/8          | 360 - 390               |                   |                |                |                |                |                           |
|                | 78               | 5              | 124            | 25             | 64             | 64             | 49,8 - 53,9             |                   |                |                |                |                |                           |



# FULL BORE HOUSING DIMENSIONS



| Class                    | $C_g$          | $C_h$     | $C_j$      | $D_a^*$                                | $D_b$          |
|--------------------------|----------------|-----------|------------|--|----------------|
| B (4-1/4 x 8)            | 3-3/8<br>86    | 5/8<br>16 | 1/2<br>13  | 6.5060 - 6.5080<br>165,252 - 165,303   | 6-1/16<br>154  |
| C (5 x 9)                | 4-1/2<br>114   | 5/8<br>16 | 1/2<br>13  | 7.6935 - 7.6955<br>195,414 - 195,465   | 7-3/16<br>183  |
| SP120                    | 4-1/16<br>103  | 5/8<br>16 | 1/2<br>13  | 7.6782 - 7.6802<br>195,025 - 195,076   | 7-3/16<br>183  |
| D (5-1/2 x 10)           | 4-7/8<br>124   | 5/8<br>16 | 1/2<br>13  | 8.1935 - 8.1955<br>208,114 - 208,165   | 7-3/4<br>197   |
| SP130                    | 4-1/16<br>103  | 5/8<br>16 | 1/2<br>13  | 8.2687 - 8.2707<br>210,025 - 210,076   | 7-3/4<br>197   |
| E (6 x 11)               | 5-1/4<br>133   | 5/8<br>16 | 9/16<br>14 | 8.6935 - 8.6955<br>220,814 - 220,865   | 8-1/4<br>210   |
| SP140                    | 4-11/32<br>110 | 5/8<br>16 | 9/16<br>14 | 8.6624 - 8.6644<br>220,025 - 220,076   | 8-1/4<br>210   |
| F (6-1/2 x 12)           | 6<br>152       | 3/4<br>19 | 9/16<br>14 | 9.9435 - 9.9455<br>252,564 - 252,615   | 9-3/8<br>238   |
| SP150                    | 5-1/16<br>129  | 3/4<br>19 | 9/16<br>14 | 9.8435 - 9.8455<br>250,025 - 250,076   | 9-3/8<br>238   |
| G (7 x 12)<br>G (7 x 14) | 6<br>152       | 3/4<br>19 | 9/16<br>14 | 10.8810 - 10.8830<br>276,377 - 276,428 | 10-9/32<br>261 |
| GG                       | 6-1/8<br>156   | -         | 9/16<br>14 | 11.8840 - 11.8860<br>301,853 - 301,904 | 11-3/16<br>284 |
| K (8)                    | 3-7/8<br>98    | -         | 9/16<br>14 | 11.8810 - 11.8830<br>301,777 - 301,828 | 11-3/16<br>284 |

Note:

\*See pages 36 and 37 for complete fitting practice information.

▲ Outer undercut can be eliminated if housing is shortened to end of the " $C_g$ " dimension.

INDUSTRIAL EQUIPMENT - FITTING PRACTICE FOR "AP" AND "SP" BEARINGS (INCHES)

| Class          | Bearing Part Number<br>Cone      Cup |            | Cone Fitting Practice        |               |                                      |               |                          |               | Cup Fitting Practice     |               |                         |               |                         |               |
|----------------|--------------------------------------|------------|------------------------------|---------------|--------------------------------------|---------------|--------------------------|---------------|--------------------------|---------------|-------------------------|---------------|-------------------------|---------------|
|                |                                      |            | Rotating Cone                |               |                                      |               | Stationary Cone          |               | Stationary Cup           |               | Rotating Cup            |               |                         |               |
|                |                                      |            | Heavy Loads, Moderate Speeds |               | Hot Applications, Table, Rolls, Etc. |               | Cone Seat d <sub>a</sub> | Resultant Fit | Cone Seat D <sub>a</sub> | Resultant Fit | Cup Seat D <sub>a</sub> | Resultant Fit | Cup Seat D <sub>a</sub> | Resultant Fit |
|                |                                      |            | Cone Seat d <sub>a</sub>     | Resultant Fit | Cone Seat d <sub>a</sub>             | Resultant Fit |                          |               |                          |               |                         |               |                         |               |
| B (4-1/4 x 8)  | HM120835                             | HM120817XD | 3.3790                       | 0.0040T       | 3.3780                               | 0.0030T       | 3.3740                   | 0.0010L       | *6.5060                  | 0.0010L       | **6.5000                | 0.0040T       |                         |               |
|                |                                      |            | 3.3780                       | 0.0020T       | 3.3770                               | 0.0010T       | 3.3730                   | 0.0030L       | *6.5080                  | 0.0080L       | **6.5010                | 0.0020T       |                         |               |
|                | HM120848                             | HM120817XD | 4.0040                       | 0.0040T       | 4.0030                               | 0.0030T       | 3.9990                   | 0.0010L       | *6.5060                  | 0.0010L       | **6.5000                | 0.0040T       |                         |               |
| C (5 x 9)      | HM124646                             | HM124618XD | 4.6915                       | 0.0040T       | 4.6905                               | 0.0030T       | 4.6865                   | 0.0010L       | *7.6935                  | 0.0010L       | **7.6875                | 0.0040T       |                         |               |
|                |                                      |            | 4.6905                       | 0.0020T       | 4.6895                               | 0.0010T       | 4.6855                   | 0.0030L       | *7.6955                  | 0.0080L       | **7.6885                | 0.0020T       |                         |               |
| SP120          | HM124649                             | HM124616XD | 4.7267                       | 0.0040T       | 4.7257                               | 0.0030T       | 4.7217                   | 0.0010L       | †7.6782                  | 0.0010L       | ††7.6722                | 0.0040T       |                         |               |
| D (5-1/2 x 10) | HM127446                             | HM127415XD | 5.1915                       | 0.0040T       | 5.1905                               | 0.0030T       | 5.1865                   | 0.0010L       | *8.1935                  | 0.0010L       | **8.1875                | 0.0040T       |                         |               |
|                |                                      |            | 5.1905                       | 0.0020T       | 5.1895                               | 0.0010T       | 5.1855                   | 0.0030L       | *8.1955                  | 0.0080L       | **8.1885                | 0.0020T       |                         |               |
| SP130          | HM127442                             | HM127417XD | 5.1208                       | 0.0040T       | 5.1198                               | 0.0030T       | 5.1158                   | 0.0010L       | †8.2687                  | 0.0010L       | ††8.2627                | 0.0040T       |                         |               |
| E (6 x 11)     | HM129848                             | HM129814XD | 5.6915                       | 0.0040T       | 5.6905                               | 0.0030T       | 5.6865                   | 0.0010L       | *8.6935                  | 0.0010L       | **8.6875                | 0.0040T       |                         |               |
|                |                                      |            | 5.6905                       | 0.0020T       | 5.6895                               | 0.0010T       | 5.6855                   | 0.0030L       | *8.6955                  | 0.0080L       | **8.6885                | 0.0020T       |                         |               |
| SP140          | HM129843                             | HM129813XD | 5.5145                       | 0.0040T       | 5.5135                               | 0.0030T       | 5.5095                   | 0.0010L       | †8.6624                  | 0.0010L       | ††8.6564                | 0.0040T       |                         |               |
| F (6-1/2 x 12) | HM133444                             | HM133416XD | 6.1915                       | 0.0040T       | 6.1905                               | 0.0030T       | 6.1865                   | 0.0010L       | *9.9435                  | 0.0010L       | **9.9375                | 0.0040T       |                         |               |
|                |                                      |            | 6.1905                       | 0.0020T       | 6.1895                               | 0.0010T       | 6.1855                   | 0.0030L       | *9.9455                  | 0.0080L       | **9.9385                | 0.0020T       |                         |               |
| SP150          | HM133436                             | HM133413XD | 5.9082                       | 0.0040T       | 5.9072                               | 0.0030T       | 5.9032                   | 0.0010L       | †9.8435                  | 0.0010L       | ††9.8375                | 0.0040T       |                         |               |
| G              | HM136936                             | HM136916XD | 6.1915                       | 0.0040T       | 6.1905                               | 0.0030T       | 6.1865                   | 0.0010L       | *10.8810                 | 0.0010L       | **10.8750               | 0.0040T       |                         |               |
|                |                                      |            | 6.1905                       | 0.0020T       | 6.1895                               | 0.0010T       | 6.1855                   | 0.0030L       | *10.8830                 | 0.0080L       | **10.8760               | 0.0020T       |                         |               |
|                | HM136940                             | HM136916XD | 6.5040                       | 0.0040T       | 6.5030                               | 0.0030T       | 6.4990                   | 0.0010L       | *10.8810                 | 0.0010L       | **10.8750               | 0.0040T       |                         |               |
|                |                                      |            | 6.5030                       | 0.0020T       | 6.5020                               | 0.0010T       | 6.4980                   | 0.0030L       | *10.8830                 | 0.0080L       | **10.8760               | 0.0020T       |                         |               |
|                | HM136948                             | HM136916XD | 7.0040                       | 0.0040T       | 7.0030                               | 0.0030T       | 6.9990                   | 0.0010L       | *10.8810                 | 0.0010L       | **10.8750               | 0.0040T       |                         |               |
| 7.0030         |                                      |            | 0.0020T                      | 7.0020        | 0.0010T                              | 6.9980        | 0.0030L                  | *10.8830      | 0.0080L                  | **10.8760     | 0.0020T                 |               |                         |               |
| GG             | H337840                              | H337816XD  | 6.5040                       | 0.0040T       | 6.5030                               | 0.0030T       | 6.4990                   | 0.0010L       | *11.8840                 | 0.0010L       | **11.8780               | 0.0040T       |                         |               |
|                |                                      |            | 6.5030                       | 0.0020T       | 6.5020                               | 0.0010T       | 6.4980                   | 0.0030L       | *11.8860                 | 0.0050L       | **11.8790               | 0.0020T       |                         |               |
| K (8)          | M241547                              | M241513XD  | 7.0040                       | 0.0040T       | 7.0030                               | 0.0030T       | 6.9990                   | 0.0010L       | *11.8840                 | 0.0010L       | **11.8780               | 0.0040T       |                         |               |
|                |                                      |            | 7.0030                       | 0.0020T       | 7.0020                               | 0.0010T       | 6.9980                   | 0.0030L       | *11.8860                 | 0.0050L       | **11.8790               | 0.0020T       |                         |               |
| K (8)          | M241547                              | M241513XD  | 8.0050                       | 0.0050T       | 8.0040                               | 0.0040T       | 7.9990                   | 0.0010L       | *11.8810                 | 0.0010L       | **11.8750               | 0.0040T       |                         |               |
|                |                                      |            | 8.0040                       | 0.0030T       | 8.0030                               | 0.0020T       | 7.9980                   | 0.0030L       | *11.8830                 | 0.0080L       | **11.8760               | 0.0020T       |                         |               |

\* Cup O.D. tolerance +0.005 -0.000 (cup No. H337816XD) O.D. tolerance +0.005 +0.003 (T) - Tight (L) - Loose

\*\* Rotating cup applications require special cup O.D. tolerance +0.004 +0.003

† Cup O.D. tolerance +0.000 -0.005

†† Rotating cup applications require special cup O.D. tolerance -0.001 -0.002

INDUSTRIAL EQUIPMENT - FITTING PRACTICE FOR "AP" AND "SP" BEARINGS (MICROMETERS,  $\mu$ m)

| Class          | Bearing Part Number<br>Cone      Cup |            | Cone Fitting Practice          |                  |                                |  |                    |            | Cup Fitting Practice           |                  |                               |                  |                               |                  |
|----------------|--------------------------------------|------------|--------------------------------|------------------|--------------------------------|--|--------------------|------------|--------------------------------|------------------|-------------------------------|------------------|-------------------------------|------------------|
|                |                                      |            | Rotating Cone                  |                  |                                |  |                    |            | Stationary Cone                |                  | Stationary Cup                |                  | Rotating Cup                  |                  |
|                |                                      |            | Heavy Loads,<br>Moderate Speed |                  |                                | Hot Applications,<br>Table Rolls, Etc. |                    |            | Cone<br>Seat<br>d <sub>a</sub> | Resultant<br>Fit | Cup<br>Seat<br>D <sub>a</sub> | Resultant<br>Fit | Cup<br>Seat<br>D <sub>a</sub> | Resultant<br>Fit |
|                |                                      |            | Cone<br>Seat<br>d <sub>a</sub> | Resultant<br>Fit | Cone<br>Seat<br>d <sub>a</sub> | Resultant<br>Fit                       |                    |            |                                |                  |                               |                  |                               |                  |
| B(4-1/4 x 8)   | HM120835                             | HM120817XD | 85,827<br>85,801               | 102T<br>51T      | 85,801<br>85,775               | 76T<br>25T                             | 85,700<br>85,674   | 25L<br>76L | *165,252<br>*165,303           | 25L<br>203L      | **165,100<br>**165,125        | 102T<br>51T      |                               |                  |
|                | HM120848                             | HM120817XD | 101,702<br>101,676             | 102T<br>51T      | 101,676<br>101,650             | 76T<br>25T                             | 101,575<br>101,549 | 25L<br>76L | *165,252<br>*165,303           | 25L<br>203L      | **165,100<br>**165,125        | 102T<br>51T      |                               |                  |
| C (5 x 9)      | HM124646                             | HM124618XD | 119,164<br>119,138             | 102T<br>51T      | 119,138<br>119,112             | 76T<br>25T                             | 119,037<br>119,011 | 25L<br>76L | *195,414<br>*195,465           | 25L<br>203L      | **195,262<br>**195,287        | 102T<br>51T      |                               |                  |
|                |                                      |            | HM124649                       | HM124616XD       | 120,059<br>120,033             | 102T<br>51T                            | 120,033<br>120,007 | 76T<br>25T | 119,932<br>119,906             | 25L<br>76T       | *195,025<br>*195,076          | 25L<br>203L      | ††194,873<br>††194,898        | 102T<br>51T      |
| D (5-1/2 x 10) | HM127446                             | HM127415XD | 131,864<br>131,838             | 102T<br>51T      | 131,838<br>131,812             | 76T<br>25T                             | 131,737<br>131,711 | 25L<br>76L | *208,114<br>*208,165           | 25L<br>203L      | **207,962<br>**207,987        | 102T<br>51T      |                               |                  |
|                |                                      |            | HM127442                       | HM127417XD       | 130,069<br>130,043             | 102T<br>51T                            | 130,043<br>130,017 | 76T<br>25T | 129,942<br>129,916             | 25L<br>76L       | *210,025<br>*210,076          | 25L<br>203L      | ††209,873<br>††209,898        | 102T<br>51T      |
| E (6 x 11)     | HM129848                             | HM129814XD | 144,564<br>144,538             | 102T<br>51T      | 144,538<br>144,512             | 76T<br>25T                             | 144,437<br>144,411 | 25L<br>76L | *220,814<br>*220,865           | 25L<br>203L      | **220,662<br>**220,687        | 102T<br>51T      |                               |                  |
|                |                                      |            | HM129843                       | HM129813XD       | 140,069<br>140,043             | 102T<br>51T                            | 140,043<br>140,017 | 76T<br>25T | 139,942<br>139,916             | 25L<br>76L       | *220,025<br>*220,076          | 25L<br>203L      | ††219,873<br>††219,898        | 102T<br>51T      |
| F (6-1/2 x 12) | HM133444                             | HM133416XD | 157,264<br>157,238             | 102T<br>51T      | 157,238<br>157,212             | 76T<br>25T                             | 157,137<br>157,111 | 25L<br>76L | *252,564<br>*252,615           | 25L<br>203L      | **252,412<br>**252,437        | 102T<br>51T      |                               |                  |
|                |                                      |            | HM133436                       | HM133413XD       | 150,069<br>150,043             | 102T<br>51T                            | 150,043<br>150,017 | 76T<br>25T | 149,942<br>149,916             | 25L<br>76L       | *250,025<br>*250,076          | 25L<br>203L      | ††249,873<br>††249,898        | 102T<br>51T      |
| G              | HM136936                             | HM136916XD | 157,264<br>157,238             | 102T<br>51T      | 157,238<br>157,212             | 76T<br>25T                             | 157,137<br>157,111 | 25L<br>76L | *276,377<br>*276,428           | 25L<br>203L      | **276,225<br>**276,250        | 102T<br>51T      |                               |                  |
|                | HM136940                             | HM136916XD | 165,202<br>165,176             | 102T<br>51T      | 165,176<br>165,150             | 76T<br>25T                             | 165,075<br>165,049 | 25L<br>76L | *276,377<br>*276,428           | 25L<br>203L      | **276,225<br>**276,250        | 102T<br>51T      |                               |                  |
|                | HM136948                             | HM136916XD | 177,902<br>177,876             | 102T<br>51T      | 177,876<br>177,850             | 76T<br>25T                             | 177,775<br>177,749 | 25L<br>76L | *276,377<br>*276,428           | 25L<br>203L      | **276,225<br>**276,250        | 102T<br>51T      |                               |                  |
|                | H337840                              | H337816XD  | 165,202<br>165,176             | 102T<br>51T      | 165,176<br>165,150             | 76T<br>25T                             | 165,075<br>165,049 | 25L<br>76L | *301,853<br>*301,904           | 25L<br>127L      | **301,701<br>**301,726        | 102T<br>51T      |                               |                  |
| GG             | H337846                              | H337816XD  | 177,902<br>177,876             | 102T<br>51T      | 177,876<br>177,850             | 76T<br>25T                             | 177,775<br>177,749 | 25L<br>76L | *301,853<br>*301,904           | 25L<br>127L      | **301,701<br>**301,726        | 102T<br>51T      |                               |                  |
|                | M241547                              | M241513XD  | 203,327<br>203,301             | 127T<br>76T      | 203,302<br>203,276             | 102T<br>51T                            | 203,175<br>203,149 | 25L<br>76L | *301,777<br>*301,828           | 25L<br>203L      | **301,625<br>**301,650        | 102T<br>51T      |                               |                  |

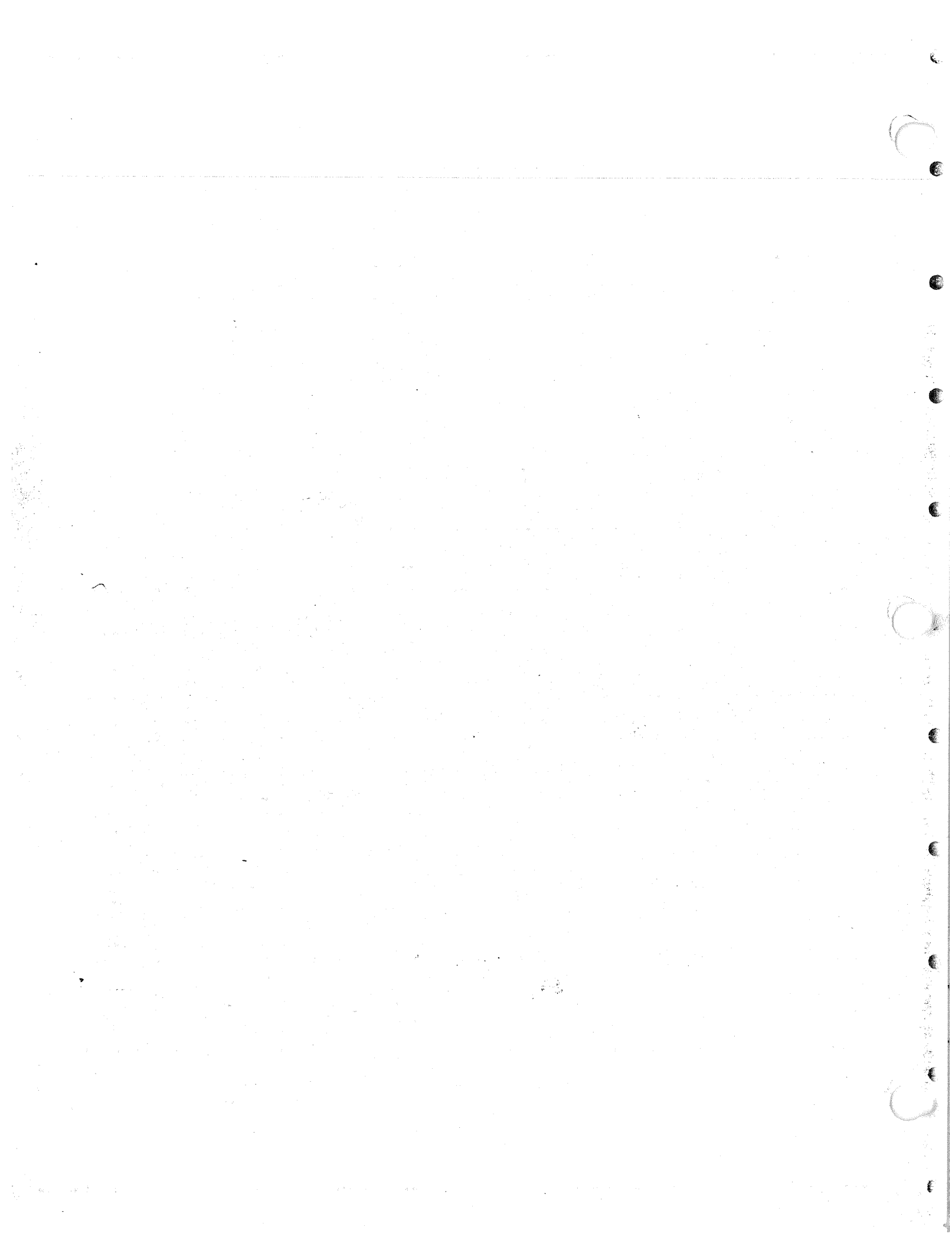
\* Cup O.D. tolerance +0,127 -0,000 (Cup No. H337816XD O.D. Tolerance +0,127 +0,076)

\*\* Rotating cup applications require special cup O.D. tolerance +0,102 +0,076

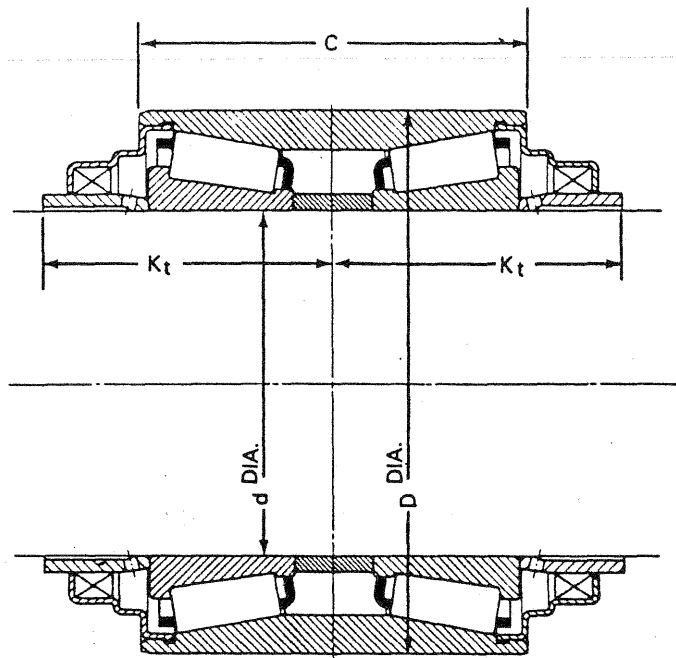
† Cup O.D. tolerance +0,000 -0,127

†† Rotating cup applications require special cup O.D. tolerance -0,025 -0,051

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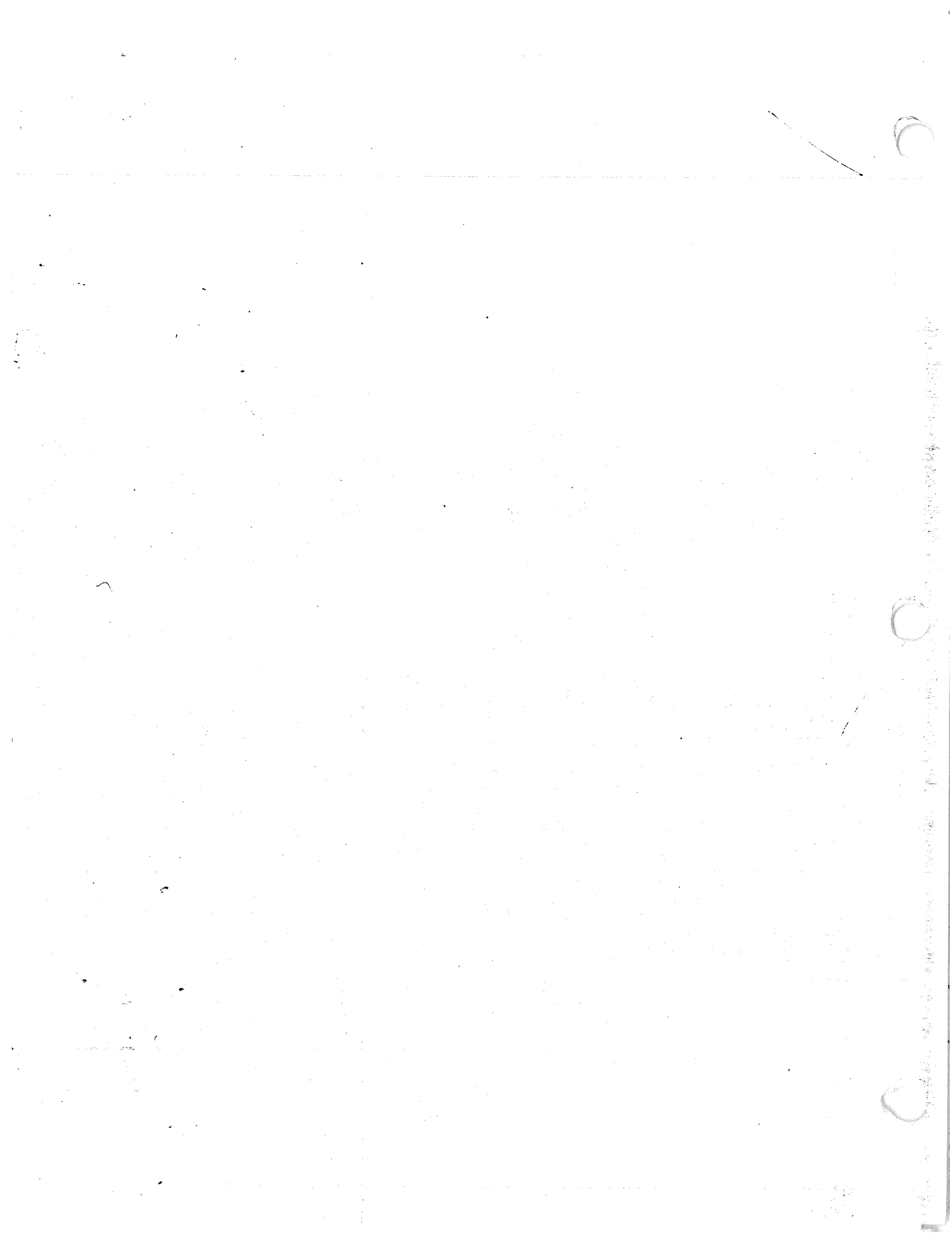
# Bearing Assembly Dimensions and Ratings



**BASIC "AP" BEARING**

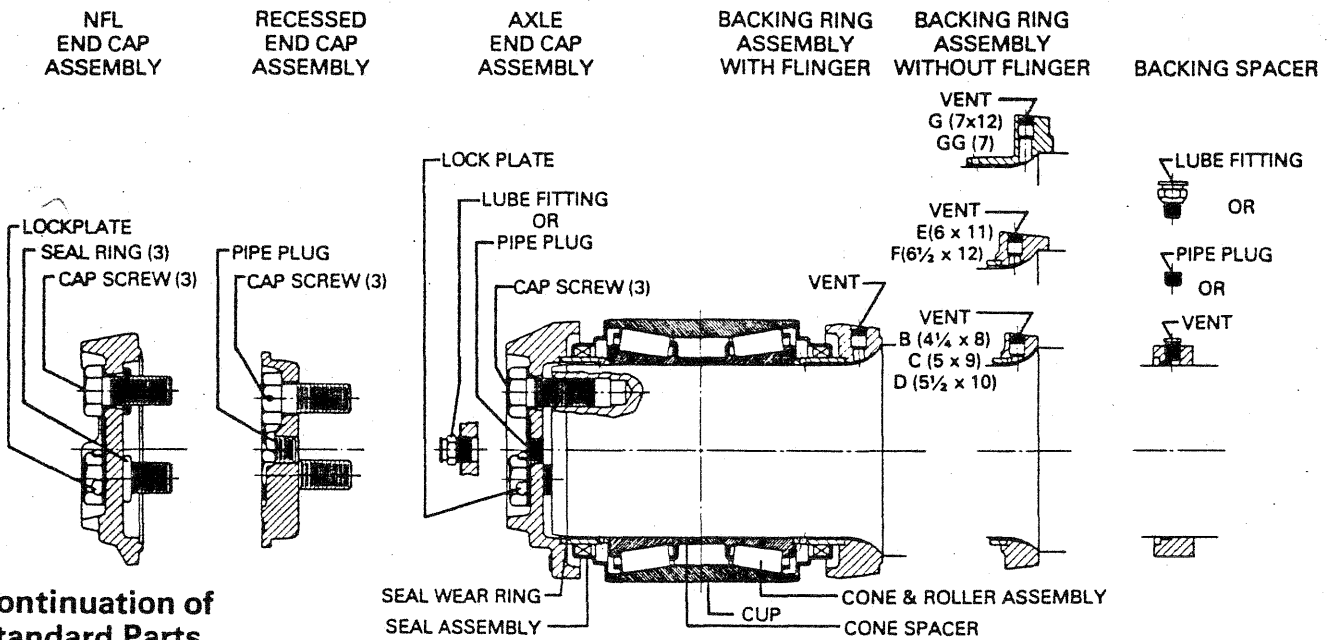
| CLASS       | CONE-<br>CUP<br>NUMBER  | Cone Bore<br>d<br>* | Cup O.D.<br>D<br>** | K <sub>t</sub> | C                 | Rating @ 500 RPM<br>For 3000 hr L-10 |                     |             |
|-------------|-------------------------|---------------------|---------------------|----------------|-------------------|--------------------------------------|---------------------|-------------|
|             |                         |                     |                     |                |                   | Radial<br>lb<br>daN                  | Thrust<br>lb<br>daN | Factor<br>K |
| B (4¼ X 8)  | HM120848-<br>HM120817XD | 4.0000<br>101.600   | 6.5000<br>165.100   | 3.59<br>91.3   | 4.5000<br>114.300 | 24300<br>10800                       | 5800<br>2580        | 2.21        |
| C (5 X 9)   | HM124646-<br>HM124618XD | 4.6875<br>119.062   | 7.6875<br>195.262   | 4.28<br>108.7  | 5.6250<br>142.875 | 35000<br>15600                       | 8300<br>3700        | 2.21        |
| D (5½ X 10) | HM127446-<br>HM127415XD | 5.1870<br>131.750   | 8.1875<br>207.962   | 4.47<br>113.5  | 6.0000<br>152.400 | 38500<br>17150                       | 9150<br>4060        | 2.21        |
| E (6 X 11)  | HM129848-<br>HM129814XD | 5.6870<br>144.450   | 8.6875<br>220.662   | 4.75<br>120.6  | 6.4375<br>163.512 | 41000<br>18200                       | 9700<br>4320        | 2.21        |
| F (6½ X 12) | HM133444-<br>HM133416XD | 6.1870<br>157.150   | 9.9375<br>252.412   | 5.38<br>136.5  | 7.2500<br>184.150 | 55500<br>24800                       | 13200<br>5900       | 2.21        |
| G (7 X 14)  | HM136948-<br>HM136916XD | 6.9995<br>177.787   | 10.8750<br>276.225  | 5.31<br>134.9  | 7.3125<br>185.738 | 64500<br>28800                       | 15400<br>6850       | 2.21        |
| GG (7)      | H337846-<br>H337816XD   | 6.9995<br>177.787   | 11.8780+<br>301.701 | 5.50<br>139.7  | 7.7500<br>196.850 | 81500<br>36200                       | 25200<br>11250      | 1.69        |
| K(8)        | M241547-<br>M241513XD   | 8.0000<br>203.200   | 11.8750<br>301.625  | 4.25<br>108.0  | 5.5156<br>140.097 | 57000<br>25400                       | 16200<br>7200       | 1.76        |

\*Cone Bore Tolerance + .0010" — .0000" (+0.025 — 0.000mm)  
 \*\*Cup O.D. Tolerance + .0050" — .0000" (+0.127 — 0.000mm)  
 +Cup H337816XD O.D. Tolerance is + .0050" + .0030" (+0.127 + 0.076mm)  
 Special Cup O.D. Tolerance + .0040" + .0030" (+0.102 + 0.0076mm) also available



# Standard Parts for Timken "AP" Bearings

| Bearing Class     | Cone     | Cup        | Cone Spacer | Seal Wear Ring | Seal Assembly | BACKING RING |                 |        | BACKING SPACER |        |           |              |
|-------------------|----------|------------|-------------|----------------|---------------|--------------|-----------------|--------|----------------|--------|-----------|--------------|
|                   |          |            |             |                |               | With Flinger | Without Flinger | Vent   | Backing Spacer | Vent   | Pipe Plug | Lube Fitting |
| B<br>(4 1/4 x 8)  | HM120848 | HM120817XD | HM120848XA  | K86890         | K86895        | K86874       | K127203         | K89716 | K118891        | K83093 | K46462    | K78880       |
| C<br>(5 x 9)      | HM124646 | HM124618XD | HM124646XA  | K86002         | K85600        | K85588       | K127204         | K89716 | K120198        | K83093 | K46462    | K78880       |
| D<br>(5 1/2 x 10) | HM127446 | HM127415XD | HM127446XA  | K85507         | K86860        | K85525       | K127205         | K89716 | K120178        | K83093 | K46462    | K78880       |
| E<br>(6 x 11)     | HM129848 | HM129814XD | HM129848XA  | K85508         | K86861        | K85095       | K127206         | K89716 | K120190        | K83093 | K46462    | K78880       |
| F<br>(6 1/2 x 12) | HM133444 | HM133416XD | HM133444XA  | K85509         | K85520        | K85516       | K125685         | K89716 | K120160        | K83093 | K46462    | K78880       |
| G<br>(7 x 12)     | HM136948 | HM136916XD | HM136948XA  | K95188         | K96501        | —            | K83160          | K89716 | K118866        | K83093 | K46462    | K78880       |
| G<br>(7 x 14)     | HM136948 | HM136916XD | HM136948XA  | K95188         | K96501        | K95200       | —               | K89716 | K118866        | K83093 | K46462    | K78880       |
| GG<br>(7" Bore)   | H337846  | H337816XD  | H337846XA   | K95188         | K99424        | —            | K83160          | K89716 | K118866        | K83093 | K46462    | K78880       |
| K<br>(8" Bore)    | M241547  | M241513XD  | M241547XA   | K504074        | K504073       | —            | —               | —      | —              | —      | —         | —            |



**Continuation of Standard Parts . . .**

| Bearing Class     | AXLE END CAP |            |           |              |           | RECESSED END CAP |           |           | NFL END CAP  |           |               |                     | Narrow Adapter NOT SHOWN | Wide Adapter NOT SHOWN |
|-------------------|--------------|------------|-----------|--------------|-----------|------------------|-----------|-----------|--------------|-----------|---------------|---------------------|--------------------------|------------------------|
|                   | Axle End Cap | Lock Plate | Cap Screw | Lube Fitting | Pipe Plug | Axle End Cap     | Cap Screw | Pipe Plug | Axle End Cap | Cap Screw | Locking Plate | Cap Screw Seal Ring |                          |                        |
| B<br>(4 1/4 x 8)  | K86877       | K84326     | K53399    | K399065      | K86891    | K399069          | K344077   | K75801    | K523660      | K53399    | K84326        | K523654             | K86888                   | K87124                 |
| C<br>(5 x 9)      | K86003       | K84325     | K44434    | K399065      | K86891    | K399070          | K344077   | K75801    | K523742      | K44434    | K84325        | K523655             | K85581                   | K86019                 |
| D<br>(5 1/2 x 10) | K85521       | K80511     | K44434    | K49022       | K75801    | K399071          | K33003    | K75801    | K523744      | K44434    | K80511        | K523655             | K85530                   | K85526                 |
| E<br>(6 x 11)     | K85510       | K80596     | K84354    | K49022       | K75801    | K399072          | K74600    | K75801    | K523746      | K84354    | K80596        | K523656             | K85073                   | K85513                 |
| F<br>(6 1/2 x 12) | K85517       | K84324     | K84351    | K49022       | K75801    | K399073          | K74600    | K75801    | K523748      | K84351    | K84324        | K523657             | K85524                   | K85531                 |
| G<br>(7 x 12)     | K95199       | K84701     | K84398    | K49022       | K75801    | K399074          | K74588    | K75801    | K523750      | K84398    | K84701        | K523658             | K83138                   | —                      |
| G<br>(7 x 14)     | K412057      | K84701     | K84398    | K49022       | K75801    | K399074          | K74588    | K75801    | —            | —         | —             | —                   | K83138                   | —                      |
| GG<br>(7" Bore)   | K462064      | K84701     | K462063   | K49022       | K75801    | K399074          | K74588    | K75801    | —            | —         | —             | —                   | —                        | —                      |
| K<br>(8" Bore)    | —            | —          | —         | —            | —         | K504075          | K74588    | K75801    | —            | —         | —             | —                   | K522803                  | —                      |

