

Free Diameter \& Ring Measurements with Section B-B


Shaft Diameter \&
Groove Dimensions


Clearance Diameter Installed In Groove

| $\begin{aligned} & \hline \text { RING } \\ & \text { NO. } \end{aligned}$ | SHAFT DIAMETER |  |  | GROOVE SIZE |  |  |  |  | RING SIZE \& WEIGHT |  |  |  |  | CLEARANCE DIA. |  | î THRUST LD. (lbs.) Sqr. Corner Abutment |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | DIAMETER |  | WIDTH |  | DEPTH | FREEDIAMETER |  | THICKNESS** |  | Wght. <br> Per <br> 1000 <br> Pcs. | Free <br> out- <br> side <br> dia. <br> REF. | Released in groove |  |  |
|  |  |  |  | Ring <br> Safety <br> factor <br> of 4 | Groove <br> Safety factor of 2 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Ds | Ds | Ds |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | DEC | FRACT | mm | Dg | Tol. | W | Tol. | d | Df | Tol. | T | Tol. | lbs. | G | L2 | Pr | Pg |
| C-12 | . 125 | 1/8 | 3.2 | . 106 | $\begin{aligned} & \pm .0015 \\ & \star .0015 \end{aligned}$ | . 020 | $\begin{aligned} & +.002 \\ & -.000 \end{aligned}$ | 0095 | 102 | $\begin{aligned} & +.002 \\ & -.004 \end{aligned}$ | . 015 | \% $\quad .030$ |  | . 165 | . 18 | 86 | 45 |
| C-15 | . 156 | 5/32 | 4.0 | . 135 |  | . 020 |  | . 0105 | . 131 |  | . 015 | ( | . 052 | . 205 | . 22 | 102 | 55 |
| C-18 | . 188 | 3/16 | 4.8 | . 165 |  | . 020 |  | . 011 | . 161 |  | . 015 |  | . 062 | . 244 | . 25 | 132 | 70 |
| C-21 | . 219 | 7/32 | 5.6 | . 193 | $\pm .002^{*} 0015$ | . 029 | $\begin{gathered} +.003 \\ -.000 \end{gathered}$ | . 013 | . 187 | $\begin{aligned} & +.003 \\ & -.005 \end{aligned}$ | . 025 |  | . 120 | . 275 | . 29 | 264 | 100 |
| C-23 | . 236 | 15/64 | 6.0 | . 208 | $\pm .002^{*} .002$ | . 029 |  | . 014 | . 203 |  | . 025 |  | . 15 | . 295 | . 31 | 284 | 115 |
| C-25 | . 250 | 1/4 | 6.4 | . 220 | $\stackrel{ \pm .002}{* .002}$ | . 029 |  | . 015 | 211 |  | . 025 |  | . 157 | . 311 | . 33 | 294 | 130 |
| C-28 | . 281 | 9/32 | 7.1 | . 247 |  | . 029 |  | . 017 | 242 |  | . 025 |  | . 19 | . 346 | . 36 | 335 | 165 |
| C-31 | . 312 | 5/16 | 7.9 | . 276 |  | . 029 |  | . 018 | 270 |  | . 025 |  | . 226 | . 376 | . 39 | 376 | 200 |
| C-37 | . 375 | 3/8 | 9.5 | . 335 |  | . 029 |  | . 020 | . 328 |  | . 025 |  | . 300 | . 448 | . 47 | 447 | 270 |
| C-40 | . 406 | 13/32 | 10.3 | . 364 |  | . 029 |  | . 021 | . 359 |  | . 025 |  | . 352 | . 486 | . 50 | 487 | 300 |
| C-43 | . 438 | 7/16 | 11.1 | . 393 |  | . 029 |  | . 022 | . 386 |  | . 025 |  | . 359 | . 517 | . 53 | 528 | 350 |
| C-50 | . 500 | 1/2 | 12.7 | . 450 | $\begin{gathered} \pm .003 \\ \star .004 \end{gathered}$ | . 039 |  | . 025 | . 441 | $\pm .006$ | . 035 |  | . 671 | . 581 | . 60 | 842 | 450 |
| C-56 | . 562 | 9/16 | 14.3 | . 507 |  | . 039 |  | . 028 | . 497 |  | . 035 |  | . 710 | . 653 | . 67 | 944 | 550 |
| C-62 | . 625 | 5/8 | 15.9 | . 563 |  | . 039 |  | . 031 | . 553 |  | . 035 |  | . 937 | . 715 | . 74 | 1045 | 700 |
| C-68 | . 688 | 11/16 | 17.5 | . 619 |  | . 046 |  | . 034 | . 608 | $\pm .007$ | . 042 |  | 1.3 | . 784 | . 80 | 1726 | 800 |
| C-75 | 750 | 3/4 | 19.0 | . 676 |  | . 046 |  | . 037 | . 665 |  | . 042 |  | 1.5 | . 845 | . 87 | 1878 | 1000 |
| C-81 | . 812 | 13/16 | 20.6 | . 732 |  | . 046 |  | . 040 | . 721 |  | . 042 |  | 1.7 | . 915 | . 94 | 2040 | 1150 |
| C-87 | . 875 | 7/8 | 22.2 | . 789 |  | . 046 |  | . 043 | . 777 |  | . 042 |  | 2.0 | . 991 | 1.01 | 2202 | 1300 |
| C-93 | . 938 | 15/16 | 23.8 | . 843 |  | . 046 |  | . 047 | . 830 |  | . 042 |  | 2.3 | 1.058 | 1.08 | 2355 | 1550 |
| C-100 | 1.000 | 1 | 25.4 | . 900 |  | . 046 |  | . 050 | . 887 |  | . 042 |  | 2.7 | 1.130 | 1.15 | 2517 | 1800 |
| C-112 | 1.125 | 1-1/8 | 28.6 | 1.013 | $\begin{aligned} & \pm .004 \\ & \star .005 \end{aligned}$ | . 056 | $\begin{gathered} +.004 \\ -.000 \end{gathered}$ | . 056 | . 997 | $\pm .008$ | . 050 |  | 4.0 | 1.267 | 1.30 | 3370 | 2200 |
| C-125 | 1.250 | 1-1/4 | 31.7 | 1.126 |  | . 056 |  | . 062 | 1.110 |  | . 050 |  | 5.1 | 1.415 | 1.44 | 3735 | 2700 |
| C-137 | 1.375 | 1-3/8 | 34.9 | 1.237 |  | . 056 |  | . 069 | 1.220 |  | . 050 |  | 6.1 | 1.555 | 1.58 | 4111 | 3350 |
| C-150 | 1.500 | 1-1/2 | 38.1 | 1.350 |  | . 056 |  | . 075 | 1.331 |  | . 050 |  | 7.6 | 1.691 | 1.72 | 4486 | 4000 |
| C-162 | 1.625 | 1-5/8 | 41.3 | 1.483 | $\begin{aligned} & \pm .005 \\ & \star .005 \end{aligned}$ | . 068 |  | . 071 | 1.463 | $\pm .010$ | . 062 | $\pm .003$ | 11.0 | 1.853 | 1.88 | 5506 | 4650 |
| C-175 | 1.750 | 1-3/4 | 44.4 | 1.576 |  | . 068 |  | . 087 | 1.555 |  | . 062 |  | 12.9 | 1.975 | 2.01 | 6526 | 5300 |
| C-200 | 2.000 | 2 | 50.8 | 1.800 |  | . 068 |  | . 100 | 1.777 |  | . 062 |  | 16.2 | 2.257 | 2.30 | 7410 | 7000 |

*F.I.M.(FULL INDICATOR MOVEMENT)-MAXIMUM ALLOWABLE DEVIATION OF CONCENTRICITY BETWEEN GROOVE AND SHAFT.
i BASED ON HOUSINGS/SHAFTS MADE OF COLD ROLLED STEEL. FOR AN EXPLANATION OF FORMULAS USED TO DERIVE
THRUST LOAD AND OTHER PERFORMANCE DATA, CONTACT THE ROTOR CLIP ENGINEERING DEPT.
*ぇ FOR PLATED RINGS ADD . 002 " TO THE LISTED MAXIMUM THICKNESS. MAXIMUM RING THICKNESS WILL BE A MINIMUM OF .0002" LESS THAN THE LISTED GROOVE WIDTH (W) MINIMUM.


Maximum Corner Radius \& Chamfer

| $\begin{aligned} & \hline \text { RING } \\ & \text { NO. } \end{aligned}$ | $\begin{aligned} & \text { MAXIMUM } \\ & \text { SECTION } \end{aligned}$ |  | $\begin{aligned} & \text { ALLOWABLE } \\ & \text { CORNER } \\ & \text { RADII \& } \\ & \text { CHAMFERS } \end{aligned}$ |  | MAX LOAD w/ R max or Ch max (in lbs.) | $\begin{gathered} \text { EDGE } \\ \text { MARGIN } \end{gathered}$ | R.P.M. LIMITS <br> Stan- <br> dard <br> material |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | S max | Tol. | R max | Ch max | P'r | Y |  |
| C-12 | . 031 | $\pm .003$ | . 014 | . 011 | 85 | . 020 | 80000 |
| C-15 | . 037 |  | . 018 | . 014 | 100 | . 020 | 75000 |
| C-18 | . 042 |  | . 021 | . 016 | 110 | . 022 | 73000 |
| C-21 | . 044 |  | . 021 | . 016 | 260 | . 026 | 71000 |
| C-23 | . 046 | $\pm .004$ | . 022 | . 017 | 275 | . 028 | 62000 |
| C-25 | . 050 |  | . 023 | . 018 | 290 | . 030 | 60000 |
| C-28 | . 051 |  | . 021 | . 016 | 310 | . 034 | 56000 |
| C-31 | . 053 |  | . 024 | . 018 | 310 | . 036 | 52000 |
| C-37 | . 060 |  | . 026 | . 020 | 310 | . 040 | 43000 |
| C-40 | . 063 |  | . 027 | . 021 | 310 | . 042 | 40000 |
| C-43 | . 065 |  | . 029 | . 022 | 310 | . 044 | 31000 |
| C-50 | . 070 | $\pm .005$ | . 030 | . 023 | 610 | . 050 | 25000 |
| C-56 | . 078 |  | . 033 | . 025 | 610 | . 056 | 22000 |
| C-62 | . 081 |  | . 033 | . 025 | 610 | . 062 | 20000 |
| C-68 | . 086 |  | . 034 | . 026 | 880 | . 068 | 18500 |
| C-75 | . 090 |  | . 036 | . 027 | 880 | . 074 | 17500 |
| C-81 | . 097 |  | . 038 | . 029 | 880 | . 080 | 16000 |
| C-87 | . 105 |  | . 040 | . 031 | 880 | . 086 | 15000 |
| C-93 | . 112 |  | . 043 | . 033 | 880 | . 094 | 14000 |
| C-100 | . 120 |  | . 046 | . 035 | 880 | . 100 | 12500 |
| C-112 | . 135 | $\pm .007$ | . 052 | . 040 | 1250 | . 112 | 11500 |
| C-125 | . 150 |  | . 057 | . 044 | 1250 | . 124 | 10500 |
| C-137 | . 165 |  | . 062 | . 048 | 1250 | . 138 | 9500 |
| C-150 | . 180 |  | . 069 | . 053 | 1250 | . 150 | 8500 |
| C-162 | . 195 |  | . 075 | . 058 | 1920 | . 162 | 8000 |
| C-175 | . 210 |  | . 081 | . 062 | 1920 | . 174 | 7500 |
| C-200 | . 240 |  | . 091 | . 070 | 1920 | . 200 | 6000 |

## LARGER SIZES MAY BE AVAILABLE UPON REQUEST.



Enlarged Groove Profile \& Edge Margin (Y) Maximum bottom radii (R), . 005 For rings sizes -12 thru $-43 ; .010$ For ring sizes -46 thru -100 ; . 015 For sizes -112 thru -200


HARDNESS RANGES: STAINLESS STEEL RINGS (PH 15-7MO)

| RING TYPE | SIZE RANGE | SCALE | ROCKWELL HARDNESS |
| :---: | :---: | :---: | :---: |
|  | $12-18$ | 15 N | $82.5-86^{\star}$ |
|  | $21-81$ | 30 N | $63-69.5$ |
|  | $87+$ | C | $44-51$ |

HARDNESS RANGES: BERYLLIUM COPPER RINGS

| RING TYPE | SIZE RANGE | SCALE | ROCKWELL HARDNESS |
| :--- | :---: | :---: | :---: |
|  | $12-62$ | 15 N | $77-82^{*}$ |
|  | $68-81$ | 30 N | $54-62$ |
|  | $87+$ | C | $34-43$ |

HARDNESS RANGES: CARBON STEEL RINGS (SAE 1060-1090)

| RING TYPE | SIZE RANGE | SCALE | ROCKWELL HARDNESS |
| :---: | :---: | :---: | :---: |
|  | $12-18$ | 15 N | $86-88.5^{\star}$ |
|  | $21-43$ | 30 N | $67.5-72$ |
|  | $50-81$ | 30 N | $66-71$ |
|  | $87+$ | C | $47-52$ |

*HARDNESS CAN NOT BE CHECKED WITH ANY DEGREE OF ACCURACY DIRECTLY ON THESE RINGS.

