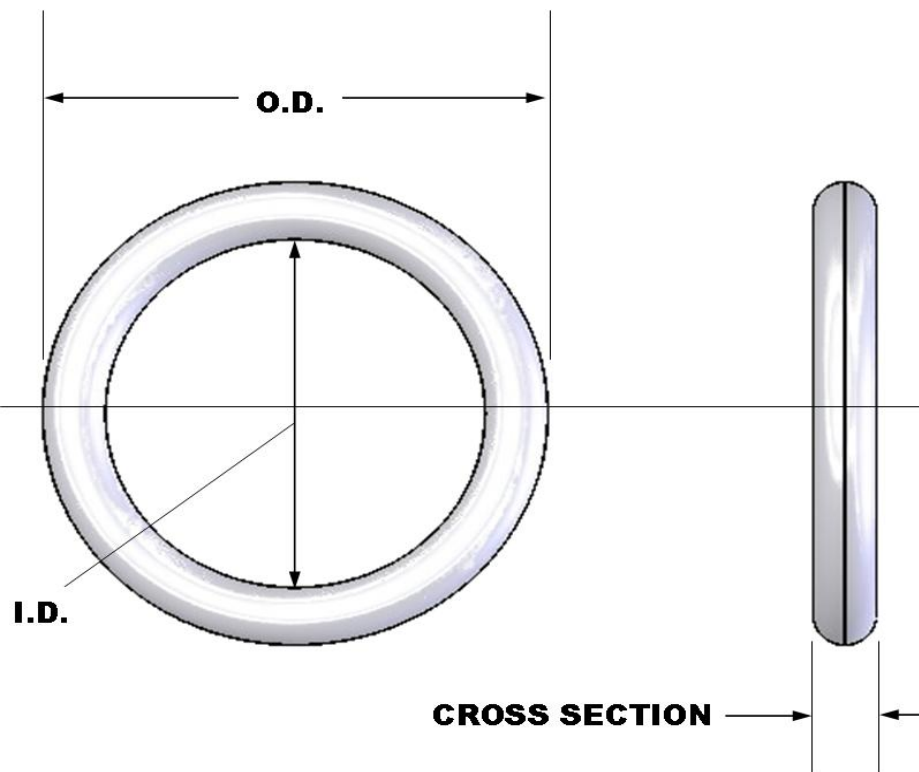




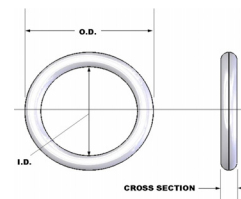
# Engineers Guide

for O-Rings





# Engineers Guide for O-Rings



O-Ring manufacturers, including Precision Associates, traditionally publish O-Ring tooling lists in order by Inside Diameter (ID). Also typical is the separation of standard O-Rings from special sizes.

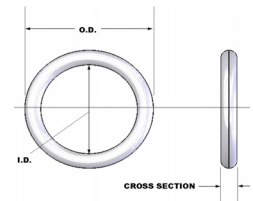
Here we list of *all* of PAI's O-Rings, presented in order by Outside Diameter (OD). ID, Cross Section (C/S) and seal tolerances are provided, as is volumetric information required for gland dimensioning. Metric dimensions are shown as well.

PAI adds a new size to our collection approximately each week. You may wish to check out our website at [www.PrecisionAssoc.com](http://www.PrecisionAssoc.com) to obtain the most up-to-date listing, or call our Customer Service department. If you still can't find the O-Ring to fit your special need, please call our Engineering department. Our In-House Tool Shop will produce a mold in short order at a very reasonable cost.

| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 6-8       | .020            | .006 ±.001 | .008 ±.002 | .00000 | .50                    | .15  | .20  |
| 10-10     | .030            | .010 ±.002 | .010 ±.003 | .00000 | .75                    | .25  | .25  |
| 14-12     | .040            | .014 ±.002 | .012 ±.003 | .00001 | 1.00                   | .35  | .30  |
| 15-16     | .046            | .015 ±.002 | .016 ±.003 | .00002 | 1.15                   | .40  | .40  |
| 20-17     | .057            | .020 ±.003 | .017 ±.004 | .00004 | 1.45                   | .50  | .45  |
| 16-28     | .060            | .016 ±.002 | .028 ±.004 | .00003 | 1.50                   | .40  | .70  |
| 20-20     | .060            | .020 ±.002 | .020 ±.004 | .00004 | 1.50                   | .50  | .50  |
| 25-10     | .060            | .025 ±.003 | .010 ±.004 | .00005 | 1.50                   | .65  | .25  |
| 15-34     | .064            | .015 ±.002 | .034 ±.004 | .00003 | 1.65                   | .40  | .85  |
| 17-30     | .064            | .017 ±.003 | .030 ±.004 | .00003 | 1.65                   | .45  | .75  |
| 20-30     | .070            | .020 ±.003 | .030 ±.004 | .00005 | 1.80                   | .50  | .75  |
| 19-38     | .076            | .019 ±.003 | .038 ±.004 | .00005 | 1.95                   | .50  | .95  |
| 17-44     | .078            | .017 ±.003 | .044 ±.004 | .00004 | 2.00                   | .45  | 1.10 |
| 16-47     | .079            | .016 ±.003 | .047 ±.004 | .00004 | 2.00                   | .40  | 1.20 |
| 29-22     | .080            | .029 ±.003 | .022 ±.004 | .00011 | 2.05                   | .75  | .55  |
| 30-23     | .083            | .030 ±.003 | .023 ±.004 | .00012 | 2.10                   | .75  | .60  |
| 20-45     | .085            | .020 ±.003 | .045 ±.004 | .00006 | 2.15                   | .50  | 1.15 |
| 27-32     | .086            | .027 ±.003 | .032 ±.004 | .00011 | 2.20                   | .70  | .80  |
| 23-41     | .087            | .023 ±.003 | .041 ±.004 | .00008 | 2.20                   | .60  | 1.05 |
| 35-18     | .088            | .035 ±.003 | .018 ±.004 | .00016 | 2.25                   | .90  | .45  |
| 38-14     | .090            | .038 ±.003 | .014 ±.004 | .00019 | 2.30                   | .95  | .35  |
| 12-67VS   | .092            | .012 ±.002 | .068 ±.004 | .00003 | 2.35                   | .30  | 1.75 |
| 31-31ES   | .093            | .031 ±.003 | .031 ±.004 | .00015 | 2.35                   | .80  | .80  |
| 40-17     | .097            | .040 ±.003 | .017 ±.004 | .00023 | 2.45                   | 1.00 | .45  |
| 17-65     | .099            | .017 ±.003 | .065 ±.004 | .00006 | 2.50                   | .45  | 1.65 |
| 32-39     | .103            | .032 ±.003 | .039 ±.004 | .00018 | 2.60                   | .80  | 1.00 |
| 40-23     | .103            | .040 ±.003 | .023 ±.004 | .00025 | 2.60                   | 1.00 | .60  |
| 31-43     | .105            | .031 ±.003 | .043 ±.004 | .00018 | 2.65                   | .80  | 1.10 |
| 31-43SS   | .106            | .031 ±.003 | .044 ±.004 | .00018 | 2.70                   | .80  | 1.10 |
| 20-66     | .106            | .020 ±.002 | .066 ±.005 | .00008 | 2.70                   | .50  | 1.70 |



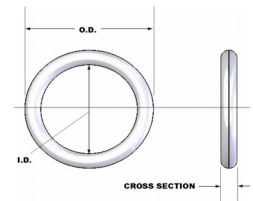
# Engineers Guide for O-Rings



| Mold IDen      | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|----------------|-----------------|------------|------------|--------|------------------------|------|------|
|                | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| <b>22-63</b>   | .107            | .022 ±.003 | .063 ±.004 | .00010 | 2.70                   | .55  | 1.60 |
| <b>1-001</b>   | .109            | .040 ±.003 | .029 ±.004 | .00027 | 2.75                   | 1.00 | .75  |
| <b>34-46</b>   | .114            | .034 ±.003 | .046 ±.004 | .00023 | 2.90                   | .85  | 1.15 |
| <b>13-89SS</b> | .116            | .013 ±.002 | .090 ±.005 | .00004 | 2.95                   | .35  | 2.30 |
| <b>21-74</b>   | .116            | .021 ±.003 | .074 ±.005 | .00010 | 2.95                   | .55  | 1.90 |
| <b>18-81ES</b> | .118            | .018 ±.003 | .082 ±.005 | .00008 | 3.00                   | .45  | 2.10 |
| <b>32-55</b>   | .119            | .032 ±.003 | .055 ±.004 | .00022 | 3.00                   | .80  | 1.40 |
| <b>36-47</b>   | .119            | .036 ±.003 | .047 ±.004 | .00027 | 3.00                   | .90  | 1.20 |
| <b>25-70</b>   | .120            | .025 ±.003 | .070 ±.005 | .00015 | 3.05                   | .65  | 1.80 |
| <b>35-50</b>   | .120            | .035 ±.003 | .050 ±.004 | .00026 | 3.05                   | .90  | 1.25 |
| <b>34-53</b>   | .121            | .034 ±.003 | .053 ±.004 | .00025 | 3.05                   | .85  | 1.35 |
| <b>48-28</b>   | .124            | .048 ±.003 | .028 ±.004 | .00043 | 3.15                   | 1.20 | .70  |
| <b>45-35</b>   | .125            | .045 ±.003 | .035 ±.004 | .00040 | 3.20                   | 1.15 | .90  |
| <b>32-62</b>   | .126            | .032 ±.003 | .062 ±.004 | .00024 | 3.20                   | .80  | 1.55 |
| <b>42-42</b>   | .126            | .042 ±.003 | .042 ±.004 | .00037 | 3.20                   | 1.05 | 1.05 |
| <b>20-87</b>   | .127            | .020 ±.003 | .087 ±.005 | .00011 | 3.25                   | .50  | 2.20 |
| <b>24-78SS</b> | .127            | .024 ±.003 | .079 ±.005 | .00015 | 3.25                   | .60  | 2.00 |
| <b>20-90</b>   | .130            | .020 ±.003 | .090 ±.005 | .00011 | 3.30                   | .50  | 2.30 |
| <b>23-84</b>   | .130            | .023 ±.003 | .084 ±.005 | .00014 | 3.30                   | .60  | 2.15 |
| <b>30-70</b>   | .130            | .030 ±.003 | .070 ±.005 | .00022 | 3.30                   | .75  | 1.80 |
| <b>31-67SS</b> | .130            | .031 ±.003 | .068 ±.004 | .00023 | 3.30                   | .80  | 1.75 |
| <b>43-45VS</b> | .131            | .043 ±.003 | .045 ±.004 | .00040 | 3.35                   | 1.10 | 1.15 |
| <b>29-76</b>   | .134            | .029 ±.003 | .076 ±.005 | .00022 | 3.40                   | .75  | 1.95 |
| <b>35-65</b>   | .135            | .035 ±.003 | .065 ±.004 | .00030 | 3.45                   | .90  | 1.65 |
| <b>28-81</b>   | .137            | .028 ±.003 | .081 ±.004 | .00021 | 3.50                   | .70  | 2.05 |
| <b>40-57</b>   | .137            | .040 ±.003 | .057 ±.004 | .00038 | 3.50                   | 1.00 | 1.45 |
| <b>30-78</b>   | .138            | .030 ±.003 | .078 ±.005 | .00024 | 3.50                   | .75  | 2.00 |
| <b>34-70</b>   | .138            | .034 ±.003 | .070 ±.005 | .00030 | 3.50                   | .85  | 1.80 |
| <b>42-55</b>   | .139            | .042 ±.003 | .055 ±.004 | .00042 | 3.55                   | 1.05 | 1.40 |
| <b>25-90</b>   | .140            | .025 ±.003 | .090 ±.005 | .00018 | 3.55                   | .65  | 2.30 |
| <b>40-59SS</b> | .140            | .040 ±.003 | .060 ±.004 | .00039 | 3.55                   | 1.00 | 1.50 |
| <b>1-002</b>   | .142            | .050 ±.003 | .042 ±.004 | .00057 | 3.60                   | 1.25 | 1.05 |
| <b>23-98</b>   | .144            | .023 ±.003 | .098 ±.005 | .00016 | 3.65                   | .60  | 2.50 |
| <b>35-75</b>   | .145            | .035 ±.003 | .075 ±.005 | .00033 | 3.70                   | .90  | 1.90 |
| <b>33-78SS</b> | .148            | .034 ±.003 | .080 ±.005 | .00033 | 3.75                   | .85  | 2.05 |
| <b>26-97</b>   | .149            | .026 ±.003 | .097 ±.005 | .00021 | 3.80                   | .65  | 2.45 |
| <b>20-110</b>  | .150            | .020 ±.003 | .110 ±.005 | .00013 | 3.80                   | .50  | 2.80 |
| <b>28-94</b>   | .150            | .028 ±.003 | .094 ±.005 | .00024 | 3.80                   | .70  | 2.40 |
| <b>40-70</b>   | .150            | .040 ±.003 | .070 ±.005 | .00043 | 3.80                   | 1.00 | 1.80 |
| <b>25-100</b>  | .150            | .025 ±.003 | .100 ±.005 | .00019 | 3.80                   | .65  | 2.55 |
| <b>44-65</b>   | .153            | .044 ±.003 | .065 ±.004 | .00052 | 3.90                   | 1.10 | 1.65 |
| <b>34-86</b>   | .154            | .034 ±.003 | .086 ±.005 | .00034 | 3.90                   | .85  | 2.20 |
| <b>47-62</b>   | .156            | .047 ±.003 | .062 ±.004 | .00059 | 3.95                   | 1.20 | 1.55 |
| <b>30-98</b>   | .158            | .030 ±.003 | .098 ±.005 | .00028 | 4.00                   | .75  | 2.50 |
| <b>36-89</b>   | .161            | .036 ±.003 | .089 ±.005 | .00040 | 4.10                   | .90  | 2.25 |



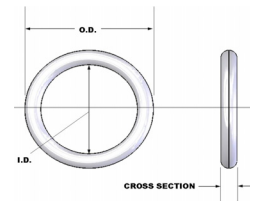
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 30-103    | .163            | .030 ±.003 | .103 ±.005 | .00030 | 4.15                   | .75  | 2.60 |
| 28-110    | .166            | .028 ±.003 | .110 ±.005 | .00027 | 4.20                   | .70  | 2.80 |
| 42-82     | .166            | .042 ±.003 | .082 ±.005 | .00054 | 4.20                   | 1.05 | 2.10 |
| 40-87     | .167            | .040 ±.003 | .087 ±.005 | .00050 | 4.25                   | 1.00 | 2.20 |
| 12-145    | .169            | .012 ±.002 | .145 ±.005 | .00006 | 4.30                   | .30  | 3.70 |
| 39-91ES   | .170            | .039 ±.003 | .092 ±.005 | .00049 | 4.30                   | 1.00 | 2.35 |
| 35-100SS  | .171            | .035 ±.003 | .101 ±.005 | .00041 | 4.35                   | .90  | 2.55 |
| 56-60     | .172            | .056 ±.003 | .060 ±.004 | .00090 | 4.35                   | 1.40 | 1.50 |
| 34-106    | .174            | .034 ±.003 | .106 ±.005 | .00040 | 4.40                   | .85  | 2.70 |
| 56-61VS   | .174            | .056 ±.003 | .062 ±.004 | .00091 | 4.40                   | 1.40 | 1.55 |
| 62-50     | .174            | .062 ±.003 | .050 ±.004 | .00106 | 4.40                   | 1.55 | 1.25 |
| 32-110VS  | .175            | .032 ±.003 | .111 ±.005 | .00036 | 4.45                   | .80  | 2.80 |
| 38-100    | .176            | .038 ±.003 | .100 ±.005 | .00049 | 4.45                   | .95  | 2.55 |
| 49-78     | .176            | .049 ±.003 | .078 ±.005 | .00075 | 4.45                   | 1.25 | 2.00 |
| 1-003     | .176            | .060 ±.003 | .056 ±.004 | .00103 | 4.45                   | 1.50 | 1.40 |
| 25-130    | .180            | .025 ±.003 | .130 ±.005 | .00024 | 4.55                   | .65  | 3.30 |
| 30-118VS  | .180            | .030 ±.003 | .120 ±.005 | .00033 | 4.55                   | .75  | 3.05 |
| 48-84     | .180            | .048 ±.003 | .084 ±.005 | .00075 | 4.55                   | 1.20 | 2.15 |
| 53-74     | .180            | .053 ±.003 | .074 ±.005 | .00088 | 4.55                   | 1.35 | 1.90 |
| 47-87     | .181            | .047 ±.003 | .087 ±.005 | .00073 | 4.60                   | 1.20 | 2.20 |
| 64-53     | .181            | .064 ±.003 | .053 ±.004 | .00118 | 4.60                   | 1.65 | 1.35 |
| 44-97     | .185            | .044 ±.003 | .097 ±.005 | .00067 | 4.70                   | 1.10 | 2.45 |
| 73-40     | .186            | .073 ±.003 | .040 ±.004 | .00149 | 4.70                   | 1.85 | 1.00 |
| 31-125    | .187            | .031 ±.003 | .125 ±.005 | .00037 | 4.75                   | .80  | 3.20 |
| 25-137SS  | .188            | .025 ±.003 | .138 ±.005 | .00025 | 4.80                   | .65  | 3.50 |
| 40-109    | .189            | .040 ±.003 | .109 ±.005 | .00059 | 4.80                   | 1.00 | 2.75 |
| 63-63ES   | .189            | .063 ±.003 | .063 ±.003 | .00123 | 4.80                   | 1.60 | 1.60 |
| 20-150    | .190            | .020 ±.003 | .150 ±.005 | .00017 | 4.85                   | .50  | 3.80 |
| 34-118SS  | .190            | .035 ±.003 | .120 ±.005 | .00047 | 4.85                   | .90  | 3.05 |
| 42-105ES  | .190            | .042 ±.003 | .106 ±.005 | .00064 | 4.85                   | 1.05 | 2.70 |
| 56-78     | .190            | .056 ±.003 | .078 ±.005 | .00104 | 4.85                   | 1.40 | 2.00 |
| 23-144    | .191            | .023 ±.003 | .145 ±.005 | .00022 | 4.85                   | .60  | 3.70 |
| 18-156    | .192            | .018 ±.003 | .156 ±.005 | .00014 | 4.90                   | .45  | 3.95 |
| 29-134    | .192            | .029 ±.003 | .134 ±.005 | .00034 | 4.90                   | .75  | 3.40 |
| 65-60SS   | .193            | .066 ±.003 | .061 ±.004 | .00136 | 4.90                   | 1.70 | 1.55 |
| 25-144    | .194            | .025 ±.003 | .144 ±.005 | .00026 | 4.95                   | .65  | 3.65 |
| 50-94     | .194            | .050 ±.003 | .094 ±.005 | .00089 | 4.95                   | 1.25 | 2.40 |
| 22-150ES  | .195            | .022 ±.003 | .151 ±.005 | .00021 | 4.95                   | .55  | 3.85 |
| 45-105    | .195            | .045 ±.003 | .105 ±.005 | .00075 | 4.95                   | 1.15 | 2.65 |
| 55-85     | .195            | .055 ±.003 | .085 ±.005 | .00104 | 4.95                   | 1.40 | 2.15 |
| 66-61VS   | .196            | .067 ±.003 | .062 ±.004 | .00143 | 5.00                   | 1.70 | 1.55 |
| 23-150ES  | .197            | .023 ±.003 | .151 ±.005 | .00023 | 5.00                   | .60  | 3.85 |
| 27-143    | .197            | .027 ±.003 | .143 ±.005 | .00031 | 5.00                   | .70  | 3.65 |
| 40-117    | .197            | .040 ±.003 | .117 ±.005 | .00062 | 5.00                   | 1.00 | 2.95 |
| 50-94VS   | .198            | .051 ±.003 | .096 ±.005 | .00094 | 5.05                   | 1.30 | 2.45 |



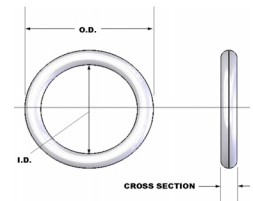
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 93-10ES   | .198            | .094 ±.003 | .010 ±.003 | .00227 | 5.05                   | 2.40 | .25  |
| 35-130    | .200            | .035 ±.003 | .130 ±.005 | .00050 | 5.10                   | .90  | 3.30 |
| 30-140SS  | .201            | .030 ±.003 | .141 ±.005 | .00038 | 5.10                   | .75  | 3.60 |
| 59-79VS   | .201            | .060 ±.003 | .081 ±.005 | .00125 | 5.10                   | 1.50 | 2.05 |
| 42-117    | .202            | .042 ±.003 | .118 ±.005 | .00070 | 5.15                   | 1.05 | 3.00 |
| 16-171    | .203            | .016 ±.003 | .171 ±.005 | .00012 | 5.15                   | .40  | 4.35 |
| 51-102    | .204            | .051 ±.003 | .102 ±.005 | .00098 | 5.20                   | 1.30 | 2.60 |
| 93-15ES   | .205            | .095 ±.003 | .015 ±.005 | .00245 | 5.20                   | 2.40 | .40  |
| 16-175    | .207            | .016 ±.003 | .175 ±.005 | .00012 | 5.25                   | .40  | 4.45 |
| 40-126SS  | .207            | .040 ±.003 | .127 ±.005 | .00066 | 5.25                   | 1.00 | 3.25 |
| 31-146    | .208            | .031 ±.003 | .146 ±.005 | .00042 | 5.30                   | .80  | 3.70 |
| 47-114    | .208            | .047 ±.003 | .114 ±.005 | .00088 | 5.30                   | 1.20 | 2.90 |
| 86-37     | .209            | .086 ±.003 | .037 ±.005 | .00224 | 5.30                   | 2.20 | .95  |
| 87-33VS   | .209            | .088 ±.003 | .033 ±.005 | .00231 | 5.30                   | 2.25 | .85  |
| 20-170    | .210            | .020 ±.003 | .170 ±.005 | .00019 | 5.35                   | .50  | 4.30 |
| 36-138    | .210            | .036 ±.003 | .138 ±.005 | .00056 | 5.35                   | .90  | 3.50 |
| 1-004     | .210            | .070 ±.003 | .070 ±.005 | .00169 | 5.35                   | 1.80 | 1.80 |
| 20-170VS  | .212            | .020 ±.003 | .172 ±.005 | .00019 | 5.40                   | .50  | 4.35 |
| 51-110    | .212            | .051 ±.003 | .110 ±.005 | .00103 | 5.40                   | 1.30 | 2.80 |
| 76-60     | .212            | .076 ±.003 | .060 ±.005 | .00194 | 5.40                   | 1.95 | 1.50 |
| 80-54     | .214            | .080 ±.003 | .054 ±.005 | .00212 | 5.45                   | 2.05 | 1.35 |
| 40-136    | .216            | .040 ±.003 | .136 ±.005 | .00069 | 5.50                   | 1.00 | 3.45 |
| 24-169    | .217            | .024 ±.003 | .169 ±.005 | .00027 | 5.50                   | .60  | 4.30 |
| 32-154    | .218            | .032 ±.003 | .154 ±.005 | .00047 | 5.55                   | .80  | 3.90 |
| 50-120    | .220            | .050 ±.003 | .120 ±.005 | .00105 | 5.60                   | 1.25 | 3.05 |
| 60-100    | .220            | .060 ±.003 | .100 ±.005 | .00142 | 5.60                   | 1.50 | 2.55 |
| 63-94     | .220            | .063 ±.003 | .094 ±.005 | .00154 | 5.60                   | 1.60 | 2.40 |
| 36-152    | .224            | .036 ±.003 | .152 ±.005 | .00060 | 5.70                   | .90  | 3.85 |
| 40-147    | .227            | .040 ±.003 | .147 ±.005 | .00074 | 5.75                   | 1.00 | 3.75 |
| 50-129    | .229            | .050 ±.003 | .129 ±.005 | .00110 | 5.80                   | 1.25 | 3.30 |
| 39-150SS  | .230            | .039 ±.003 | .152 ±.005 | .00072 | 5.85                   | 1.00 | 3.85 |
| 70-87     | .230            | .071 ±.003 | .088 ±.005 | .00198 | 5.85                   | 1.80 | 2.25 |
| 60-111    | .231            | .060 ±.003 | .111 ±.005 | .00152 | 5.85                   | 1.50 | 2.80 |
| 38-157    | .233            | .038 ±.003 | .157 ±.005 | .00069 | 5.90                   | .95  | 4.00 |
| 39-154SS  | .234            | .039 ±.003 | .156 ±.005 | .00073 | 5.95                   | 1.00 | 3.95 |
| 75-85     | .235            | .075 ±.003 | .085 ±.005 | .00222 | 5.95                   | 1.90 | 2.15 |
| 30-176    | .236            | .030 ±.003 | .176 ±.005 | .00046 | 6.00                   | .75  | 4.45 |
| 43-150    | .236            | .043 ±.003 | .150 ±.005 | .00088 | 6.00                   | 1.10 | 3.80 |
| 48-140    | .236            | .048 ±.003 | .140 ±.005 | .00107 | 6.00                   | 1.20 | 3.55 |
| 23-191    | .237            | .023 ±.003 | .191 ±.005 | .00028 | 6.00                   | .60  | 4.85 |
| 50-140    | .240            | .050 ±.003 | .140 ±.005 | .00117 | 6.10                   | 1.25 | 3.55 |
| 56-125VS  | .241            | .057 ±.003 | .127 ±.005 | .00148 | 6.10                   | 1.45 | 3.25 |
| 1-005     | .241            | .070 ±.003 | .101 ±.005 | .00207 | 6.10                   | 1.80 | 2.55 |
| 70-98SS   | .241            | .071 ±.003 | .099 ±.005 | .00211 | 6.10                   | 1.80 | 2.50 |
| 40-162    | .242            | .040 ±.003 | .162 ±.005 | .00080 | 6.15                   | 1.00 | 4.10 |



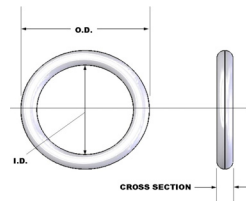
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 72-97VS   | .242            | .072 ±.003 | .098 ±.005 | .00217 | 6.15                   | 1.85 | 2.50 |
| 46-152    | .244            | .046 ±.003 | .152 ±.005 | .00103 | 6.20                   | 1.15 | 3.85 |
| 94-57     | .245            | .094 ±.003 | .057 ±.005 | .00329 | 6.20                   | 2.40 | 1.45 |
| 25-190SS  | .246            | .025 ±.003 | .196 ±.005 | .00034 | 6.25                   | .65  | 5.00 |
| 37-172    | .246            | .037 ±.003 | .172 ±.005 | .00071 | 6.25                   | .95  | 4.35 |
| 23-200    | .248            | .023 ±.003 | .202 ±.005 | .00029 | 6.30                   | .60  | 5.15 |
| 70-108    | .248            | .070 ±.003 | .108 ±.005 | .00215 | 6.30                   | 1.80 | 2.75 |
| 31-187    | .249            | .031 ±.003 | .187 ±.005 | .00052 | 6.30                   | .80  | 4.75 |
| 62-125    | .249            | .062 ±.003 | .125 ±.005 | .00177 | 6.30                   | 1.55 | 3.20 |
| 81-87     | .249            | .081 ±.003 | .087 ±.005 | .00272 | 6.30                   | 2.05 | 2.20 |
| 68-113VS  | .250            | .068 ±.003 | .114 ±.005 | .00208 | 6.35                   | 1.75 | 2.90 |
| 85-80     | .250            | .085 ±.003 | .080 ±.005 | .00294 | 6.35                   | 2.15 | 2.05 |
| 63-122VS  | .252            | .064 ±.003 | .124 ±.005 | .00190 | 6.40                   | 1.65 | 3.15 |
| 75-102    | .252            | .075 ±.003 | .102 ±.005 | .00246 | 6.40                   | 1.90 | 2.60 |
| 24-205    | .253            | .024 ±.003 | .205 ±.005 | .00033 | 6.45                   | .60  | 5.20 |
| 70-113ES  | .253            | .070 ±.003 | .113 ±.005 | .00221 | 6.45                   | 1.80 | 2.85 |
| 50-154    | .254            | .050 ±.003 | .154 ±.005 | .00126 | 6.45                   | 1.25 | 3.90 |
| 58-133SS  | .254            | .059 ±.003 | .136 ±.005 | .00167 | 6.45                   | 1.50 | 3.45 |
| 60-134    | .254            | .060 ±.003 | .134 ±.005 | .00172 | 6.45                   | 1.50 | 3.40 |
| 1-006     | .254            | .070 ±.003 | .114 ±.005 | .00222 | 6.45                   | 1.80 | 2.90 |
| 40-176    | .256            | .040 ±.003 | .176 ±.005 | .00085 | 6.50                   | 1.00 | 4.45 |
| 59-138    | .256            | .059 ±.003 | .138 ±.005 | .00169 | 6.50                   | 1.50 | 3.50 |
| 1-102     | .256            | .103 ±.003 | .049 ±.005 | .00401 | 6.50                   | 2.60 | 1.25 |
| 28-201    | .257            | .028 ±.003 | .201 ±.005 | .00044 | 6.55                   | .70  | 5.10 |
| 35-188VS  | .260            | .035 ±.003 | .190 ±.005 | .00068 | 6.60                   | .90  | 4.85 |
| 35-190    | .260            | .035 ±.003 | .190 ±.005 | .00068 | 6.60                   | .90  | 4.85 |
| 40-180    | .260            | .040 ±.003 | .180 ±.005 | .00087 | 6.60                   | 1.00 | 4.55 |
| 45-165SS  | .262            | .046 ±.003 | .170 ±.005 | .00113 | 6.65                   | 1.15 | 4.30 |
| 70-125    | .265            | .070 ±.003 | .125 ±.005 | .00236 | 6.75                   | 1.80 | 3.20 |
| 40-184SS  | .266            | .040 ±.003 | .186 ±.005 | .00089 | 6.75                   | 1.00 | 4.70 |
| 48-170    | .266            | .048 ±.003 | .170 ±.005 | .00124 | 6.75                   | 1.20 | 4.30 |
| 54-158    | .266            | .054 ±.003 | .158 ±.005 | .00153 | 6.75                   | 1.35 | 4.00 |
| 25-218    | .268            | .025 ±.003 | .218 ±.005 | .00037 | 6.80                   | .65  | 5.55 |
| 30-208    | .268            | .030 ±.003 | .208 ±.005 | .00053 | 6.80                   | .75  | 5.30 |
| 28-210SS  | .269            | .028 ±.003 | .213 ±.005 | .00047 | 6.85                   | .70  | 5.40 |
| 39-189SS  | .269            | .039 ±.003 | .191 ±.005 | .00086 | 6.85                   | 1.00 | 4.85 |
| 70-127SS  | .271            | .071 ±.003 | .129 ±.005 | .00249 | 6.90                   | 1.80 | 3.30 |
| 93-085    | .271            | .093 ±.003 | .085 ±.005 | .00380 | 6.90                   | 2.35 | 2.15 |
| 121-029   | .271            | .121 ±.004 | .029 ±.005 | .00542 | 6.90                   | 3.05 | .75  |
| 30-212SS  | .274            | .030 ±.003 | .214 ±.005 | .00054 | 6.95                   | .75  | 5.45 |
| 33-210    | .276            | .033 ±.003 | .210 ±.005 | .00065 | 7.00                   | .85  | 5.35 |
| 50-176    | .276            | .050 ±.003 | .176 ±.005 | .00139 | 7.00                   | 1.25 | 4.45 |
| 59-158    | .276            | .059 ±.003 | .158 ±.005 | .00186 | 7.00                   | 1.50 | 4.00 |
| 40-200    | .280            | .040 ±.003 | .200 ±.005 | .00095 | 7.10                   | 1.00 | 5.10 |
| 80-120    | .280            | .080 ±.003 | .120 ±.005 | .00316 | 7.10                   | 2.05 | 3.05 |



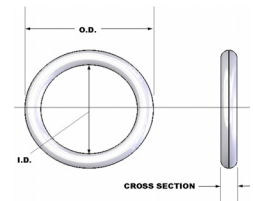
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 48-185    | .281            | .048 ±.003 | .185 ±.005 | .00132 | 7.15                   | 1.20 | 4.70 |
| 33-210SS  | .282            | .034 ±.003 | .214 ±.005 | .00071 | 7.15                   | .85  | 5.45 |
| 32-220    | .284            | .032 ±.003 | .220 ±.005 | .00064 | 7.20                   | .80  | 5.60 |
| 75-134    | .284            | .075 ±.003 | .134 ±.005 | .00290 | 7.20                   | 1.90 | 3.40 |
| 1-007     | .285            | .070 ±.003 | .145 ±.005 | .00260 | 7.25                   | 1.80 | 3.70 |
| 39-208    | .286            | .039 ±.003 | .208 ±.005 | .00093 | 7.25                   | 1.00 | 5.30 |
| 60-166    | .286            | .060 ±.003 | .166 ±.005 | .00201 | 7.25                   | 1.50 | 4.20 |
| 25-237    | .287            | .025 ±.003 | .237 ±.005 | .00040 | 7.30                   | .65  | 6.00 |
| 50-187    | .287            | .050 ±.003 | .187 ±.005 | .00146 | 7.30                   | 1.25 | 4.75 |
| 1-103     | .287            | .103 ±.003 | .081 ±.005 | .00482 | 7.30                   | 2.60 | 2.05 |
| 20-248    | .288            | .020 ±.003 | .248 ±.005 | .00026 | 7.30                   | .50  | 6.30 |
| 56-176    | .288            | .056 ±.003 | .176 ±.005 | .00180 | 7.30                   | 1.40 | 4.45 |
| 109-70    | .288            | .109 ±.004 | .070 ±.005 | .00525 | 7.30                   | 2.75 | 1.80 |
| 40-210    | .290            | .040 ±.003 | .210 ±.005 | .00099 | 7.35                   | 1.00 | 5.35 |
| 37-220    | .294            | .037 ±.003 | .220 ±.005 | .00087 | 7.45                   | .95  | 5.60 |
| 1-901     | .297            | .056 ±.003 | .185 ±.005 | .00186 | 7.55                   | 1.40 | 4.70 |
| 76-145    | .297            | .076 ±.003 | .145 ±.005 | .00315 | 7.55                   | 1.95 | 3.70 |
| 41-216    | .298            | .041 ±.003 | .216 ±.005 | .00107 | 7.55                   | 1.05 | 5.50 |
| 70-145SS  | .298            | .073 ±.003 | .152 ±.005 | .00296 | 7.55                   | 1.85 | 3.85 |
| 31-238    | .300            | .031 ±.003 | .238 ±.005 | .00064 | 7.60                   | .80  | 6.05 |
| 45-209ES  | .300            | .045 ±.003 | .210 ±.005 | .00127 | 7.60                   | 1.15 | 5.35 |
| 30-239VS  | .301            | .030 ±.003 | .241 ±.005 | .00060 | 7.65                   | .75  | 6.10 |
| 21-260    | .302            | .021 ±.003 | .260 ±.005 | .00031 | 7.65                   | .55  | 6.60 |
| 51-199ES  | .302            | .051 ±.003 | .200 ±.005 | .00161 | 7.65                   | 1.30 | 5.10 |
| 70-161ES  | .302            | .070 ±.003 | .162 ±.005 | .00280 | 7.65                   | 1.80 | 4.10 |
| 34-232SS  | .303            | .034 ±.003 | .235 ±.005 | .00077 | 7.70                   | .85  | 5.95 |
| 55-195    | .305            | .055 ±.003 | .195 ±.005 | .00187 | 7.75                   | 1.40 | 4.95 |
| 80-145    | .305            | .080 ±.003 | .145 ±.005 | .00355 | 7.75                   | 2.05 | 3.70 |
| 40-228    | .308            | .040 ±.003 | .228 ±.005 | .00106 | 7.80                   | 1.00 | 5.80 |
| 50-208    | .308            | .050 ±.003 | .208 ±.005 | .00159 | 7.80                   | 1.25 | 5.30 |
| 88-135    | .311            | .088 ±.003 | .135 ±.005 | .00426 | 7.90                   | 2.25 | 3.45 |
| 62-188    | .312            | .062 ±.003 | .188 ±.005 | .00237 | 7.90                   | 1.55 | 4.80 |
| 68-176    | .312            | .068 ±.003 | .176 ±.005 | .00278 | 7.90                   | 1.75 | 4.45 |
| 32-250    | .314            | .032 ±.003 | .250 ±.005 | .00071 | 8.00                   | .80  | 6.35 |
| 40-228SS  | .314            | .041 ±.003 | .232 ±.005 | .00113 | 8.00                   | 1.05 | 5.90 |
| 54-210NS  | .315            | .053 ±.003 | .209 ±.005 | .00182 | 8.00                   | 1.35 | 5.30 |
| 75-165    | .315            | .075 ±.003 | .165 ±.005 | .00333 | 8.00                   | 1.90 | 4.20 |
| 46-224    | .316            | .046 ±.003 | .224 ±.005 | .00141 | 8.05                   | 1.15 | 5.70 |
| 1-008     | .316            | .070 ±.003 | .176 ±.005 | .00297 | 8.05                   | 1.80 | 4.45 |
| 78-157SS  | .316            | .079 ±.003 | .158 ±.005 | .00365 | 8.05                   | 2.00 | 4.00 |
| 40-238    | .318            | .040 ±.003 | .238 ±.005 | .00110 | 8.10                   | 1.00 | 6.05 |
| 1-104     | .318            | .103 ±.003 | .112 ±.005 | .00563 | 8.10                   | 2.60 | 2.85 |
| 40-239    | .319            | .040 ±.003 | .239 ±.005 | .00110 | 8.10                   | 1.00 | 6.05 |
| 35-250    | .320            | .035 ±.003 | .250 ±.005 | .00086 | 8.15                   | .90  | 6.35 |



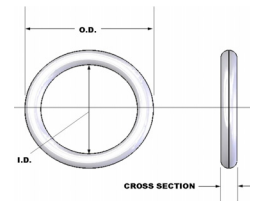
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 95-130    | .320            | .095 ±.003 | .130 ±.005 | .00501 | 8.15                   | 2.40 | 3.30 |
| 53-216    | .322            | .053 ±.003 | .216 ±.005 | .00186 | 8.20                   | 1.35 | 5.50 |
| 42-239    | .323            | .042 ±.003 | .239 ±.005 | .00122 | 8.20                   | 1.05 | 6.05 |
| 59-200VS  | .323            | .060 ±.003 | .203 ±.005 | .00234 | 8.20                   | 1.50 | 5.15 |
| 34-256    | .324            | .034 ±.003 | .256 ±.005 | .00083 | 8.25                   | .85  | 6.50 |
| 70-187    | .327            | .070 ±.003 | .187 ±.005 | .00311 | 8.30                   | 1.80 | 4.75 |
| 73-182    | .328            | .073 ±.003 | .182 ±.005 | .00335 | 8.35                   | 1.85 | 4.60 |
| 94-142    | .330            | .094 ±.003 | .142 ±.005 | .00515 | 8.40                   | 2.40 | 3.60 |
| 52-229    | .333            | .052 ±.003 | .229 ±.005 | .00187 | 8.45                   | 1.30 | 5.80 |
| 24-285VS  | .335            | .024 ±.003 | .287 ±.005 | .00044 | 8.50                   | .60  | 7.30 |
| 25-285    | .335            | .025 ±.003 | .285 ±.005 | .00048 | 8.50                   | .65  | 7.25 |
| 30-272SS  | .335            | .030 ±.003 | .275 ±.005 | .00068 | 8.50                   | .75  | 7.00 |
| 40-248SS  | .335            | .041 ±.003 | .253 ±.005 | .00122 | 8.50                   | 1.05 | 6.45 |
| 45-245    | .335            | .045 ±.003 | .245 ±.005 | .00145 | 8.50                   | 1.15 | 6.20 |
| 48-239    | .335            | .048 ±.003 | .239 ±.005 | .00163 | 8.50                   | 1.20 | 6.05 |
| 60-215    | .335            | .060 ±.003 | .215 ±.005 | .00244 | 8.50                   | 1.50 | 5.45 |
| 70-195    | .335            | .070 ±.003 | .195 ±.005 | .00320 | 8.50                   | 1.80 | 4.95 |
| 133-70    | .336            | .133 ±.004 | .070 ±.005 | .00886 | 8.55                   | 3.40 | 1.80 |
| 40-258    | .338            | .040 ±.003 | .258 ±.005 | .00118 | 8.60                   | 1.00 | 6.55 |
| 51-232SS  | .338            | .052 ±.003 | .234 ±.005 | .00191 | 8.60                   | 1.30 | 5.95 |
| 87-158SS  | .339            | .089 ±.003 | .161 ±.005 | .00489 | 8.60                   | 2.25 | 4.10 |
| 51-239    | .341            | .051 ±.003 | .239 ±.005 | .00186 | 8.65                   | 1.30 | 6.05 |
| 60-217ES  | .341            | .061 ±.003 | .219 ±.005 | .00257 | 8.65                   | 1.55 | 5.55 |
| 70-202    | .342            | .070 ±.003 | .202 ±.005 | .00329 | 8.70                   | 1.80 | 5.15 |
| 48-248    | .344            | .048 ±.003 | .248 ±.005 | .00168 | 8.75                   | 1.20 | 6.30 |
| 20-305    | .345            | .020 ±.003 | .305 ±.005 | .00032 | 8.75                   | .50  | 7.75 |
| 69-208    | .346            | .069 ±.003 | .208 ±.005 | .00325 | 8.80                   | 1.75 | 5.30 |
| 1-009     | .348            | .070 ±.003 | .208 ±.005 | .00336 | 8.85                   | 1.80 | 5.30 |
| 46-257    | .349            | .046 ±.003 | .257 ±.005 | .00158 | 8.85                   | 1.15 | 6.55 |
| 1-105     | .349            | .103 ±.003 | .143 ±.005 | .00644 | 8.85                   | 2.60 | 3.65 |
| 25-301    | .351            | .025 ±.003 | .301 ±.005 | .00050 | 8.90                   | .65  | 7.65 |
| 36-272SS  | .351            | .037 ±.003 | .277 ±.005 | .00106 | 8.90                   | .95  | 7.05 |
| 51-249    | .351            | .051 ±.003 | .249 ±.005 | .00193 | 8.90                   | 1.30 | 6.30 |
| 71-210    | .352            | .071 ±.003 | .210 ±.005 | .00350 | 8.95                   | 1.80 | 5.35 |
| 93-166    | .352            | .093 ±.003 | .166 ±.005 | .00553 | 8.95                   | 2.35 | 4.20 |
| 71-211ES  | .354            | .071 ±.003 | .212 ±.005 | .00352 | 9.00                   | 1.80 | 5.40 |
| 35-283SS  | .356            | .035 ±.003 | .286 ±.005 | .00097 | 9.05                   | .90  | 7.25 |
| 56-239VS  | .357            | .057 ±.003 | .243 ±.005 | .00240 | 9.05                   | 1.45 | 6.15 |
| 62-230SS  | .358            | .063 ±.003 | .232 ±.005 | .00289 | 9.10                   | 1.60 | 5.90 |
| 70-219    | .359            | .070 ±.003 | .219 ±.005 | .00349 | 9.10                   | 1.80 | 5.55 |
| 40-275SS  | .361            | .041 ±.003 | .279 ±.005 | .00133 | 9.15                   | 1.05 | 7.10 |
| 32-295VS  | .362            | .032 ±.003 | .297 ±.005 | .00083 | 9.20                   | .80  | 7.55 |
| 44-277    | .365            | .044 ±.003 | .277 ±.005 | .00153 | 9.25                   | 1.10 | 7.05 |
| 44-278    | .365            | .044 ±.003 | .277 ±.005 | .00153 | 9.25                   | 1.10 | 7.05 |
| 60-246    | .366            | .060 ±.003 | .246 ±.005 | .00272 | 9.30                   | 1.50 | 6.25 |



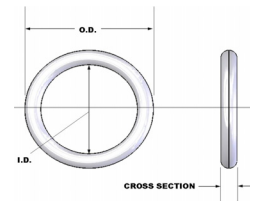
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|-----------|-----------------|------------|------------|--------|------------------------|------|------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 63-240    | .366            | .063 ±.003 | .240 ±.005 | .00297 | 9.30                   | 1.60 | 6.10 |
| 1-902     | .367            | .064 ±.003 | .239 ±.005 | .00306 | 9.30                   | 1.65 | 6.05 |
| 74-224    | .372            | .074 ±.003 | .224 ±.005 | .00403 | 9.45                   | 1.90 | 5.70 |
| 80-208VS  | .372            | .081 ±.003 | .210 ±.005 | .00471 | 9.45                   | 2.05 | 5.35 |
| 39-295    | .373            | .039 ±.003 | .295 ±.005 | .00125 | 9.45                   | 1.00 | 7.50 |
| 31-312    | .374            | .031 ±.003 | .312 ±.005 | .00081 | 9.50                   | .80  | 7.90 |
| 34-306    | .374            | .034 ±.003 | .306 ±.005 | .00097 | 9.50                   | .85  | 7.75 |
| 133-109   | .375            | .133 ±.004 | .109 ±.005 | .01056 | 9.55                   | 3.40 | 2.75 |
| 53-270    | .376            | .053 ±.003 | .270 ±.005 | .00224 | 9.55                   | 1.35 | 6.85 |
| 38-301    | .377            | .038 ±.003 | .301 ±.005 | .00121 | 9.60                   | .95  | 7.65 |
| 46-278VS  | .377            | .047 ±.003 | .283 ±.005 | .00180 | 9.60                   | 1.20 | 7.20 |
| 35-307ES  | .378            | .035 ±.003 | .308 ±.005 | .00104 | 9.60                   | .90  | 7.80 |
| 28-320VS  | .379            | .028 ±.003 | .323 ±.005 | .00068 | 9.65                   | .70  | 8.20 |
| 1-010     | .379            | .070 ±.003 | .239 ±.005 | .00374 | 9.65                   | 1.80 | 6.05 |
| 45-290    | .380            | .045 ±.003 | .290 ±.005 | .00167 | 9.65                   | 1.15 | 7.35 |
| 70-240    | .380            | .070 ±.003 | .240 ±.005 | .00375 | 9.65                   | 1.80 | 6.10 |
| 1-106     | .381            | .103 ±.003 | .175 ±.005 | .00728 | 9.70                   | 2.60 | 4.45 |
| 68-246    | .382            | .068 ±.003 | .246 ±.005 | .00358 | 9.70                   | 1.75 | 6.25 |
| 79-224    | .382            | .079 ±.003 | .224 ±.005 | .00467 | 9.70                   | 2.00 | 5.70 |
| 104-176   | .384            | .104 ±.003 | .176 ±.005 | .00747 | 9.75                   | 2.65 | 4.45 |
| 42-301    | .385            | .042 ±.003 | .301 ±.005 | .00149 | 9.80                   | 1.05 | 7.65 |
| 60-265    | .385            | .060 ±.003 | .265 ±.005 | .00289 | 9.80                   | 1.50 | 6.75 |
| 71-243    | .385            | .071 ±.003 | .243 ±.005 | .00391 | 9.80                   | 1.80 | 6.15 |
| 36-312SS  | .387            | .036 ±.003 | .315 ±.005 | .00112 | 9.85                   | .90  | 8.00 |
| 50-287    | .387            | .050 ±.003 | .287 ±.005 | .00208 | 9.85                   | 1.25 | 7.30 |
| 139-109   | .387            | .139 ±.004 | .109 ±.005 | .01182 | 9.85                   | 3.55 | 2.75 |
| 73-239SS  | .389            | .074 ±.003 | .241 ±.005 | .00426 | 9.90                   | 1.90 | 6.10 |
| 71-248    | .390            | .071 ±.003 | .248 ±.005 | .00397 | 9.90                   | 1.80 | 6.30 |
| 35-322    | .392            | .035 ±.003 | .322 ±.005 | .00108 | 9.95                   | .90  | 8.20 |
| 74-244    | .392            | .074 ±.003 | .244 ±.005 | .00430 | 9.95                   | 1.90 | 6.20 |
| 78-236    | .392            | .078 ±.003 | .236 ±.005 | .00471 | 9.95                   | 2.00 | 6.00 |
| 90-208VS  | .392            | .091 ±.003 | .210 ±.005 | .00615 | 9.95                   | 2.30 | 5.35 |
| 35-318VS  | .393            | .035 ±.003 | .323 ±.005 | .00108 | 10.00                  | .90  | 8.20 |
| 98-197    | .393            | .098 ±.003 | .197 ±.005 | .00699 | 10.00                  | 2.50 | 5.00 |
| 31-332    | .394            | .031 ±.003 | .332 ±.005 | .00086 | 10.00                  | .80  | 8.45 |
| 77-240    | .394            | .077 ±.003 | .240 ±.005 | .00464 | 10.00                  | 1.95 | 6.10 |
| 35-318VS  | .395            | .036 ±.003 | .323 ±.005 | .00115 | 10.05                  | .90  | 8.20 |
| 49-295ES  | .395            | .049 ±.003 | .297 ±.005 | .00205 | 10.05                  | 1.25 | 7.55 |
| 59-279    | .397            | .059 ±.003 | .279 ±.005 | .00290 | 10.10                  | 1.50 | 7.10 |
| 46-307    | .399            | .046 ±.003 | .307 ±.005 | .00184 | 10.15                  | 1.15 | 7.80 |
| 50-300    | .400            | .050 ±.003 | .300 ±.005 | .00216 | 10.15                  | 1.25 | 7.60 |
| 43-315    | .401            | .043 ±.003 | .315 ±.005 | .00163 | 10.20                  | 1.10 | 8.00 |
| 71-256VS  | .403            | .072 ±.003 | .259 ±.005 | .00423 | 10.25                  | 1.85 | 6.60 |
| 71-256VS  | .403            | .072 ±.003 | .259 ±.005 | .00423 | 10.25                  | 1.85 | 6.60 |
| 70-258SS  | .404            | .071 ±.003 | .262 ±.005 | .00414 | 10.25                  | 1.80 | 6.65 |



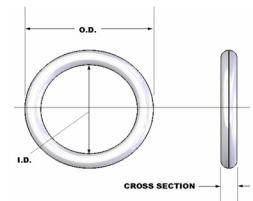
# Engineers Guide for O-Rings



| Mold IDen  | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |      |
|------------|-----------------|------------|------------|--------|------------------------|------|------|
|            | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID   |
| 39-327     | .405            | .039 ±.003 | .327 ±.005 | .00137 | 10.30                  | 1.00 | 8.30 |
| 28-346VS   | .407            | .028 ±.003 | .351 ±.005 | .00073 | 10.35                  | .70  | 8.90 |
| 45-315ES   | .407            | .045 ±.003 | .317 ±.005 | .00181 | 10.35                  | 1.15 | 8.05 |
| 52-306     | .410            | .052 ±.003 | .306 ±.005 | .00239 | 10.40                  | 1.30 | 7.75 |
| 70-270     | .410            | .070 ±.003 | .270 ±.005 | .00411 | 10.40                  | 1.80 | 6.85 |
| 80-250     | .410            | .080 ±.003 | .250 ±.005 | .00521 | 10.40                  | 2.05 | 6.35 |
| 63-281SS   | .411            | .063 ±.003 | .285 ±.005 | .00341 | 10.45                  | 1.60 | 7.25 |
| 77-250SS   | .411            | .078 ±.003 | .255 ±.005 | .00500 | 10.45                  | 2.00 | 6.50 |
| 1-107      | .412            | .103 ±.003 | .206 ±.005 | .00809 | 10.45                  | 2.60 | 5.25 |
| 59-295     | .413            | .059 ±.003 | .295 ±.005 | .00304 | 10.50                  | 1.50 | 7.50 |
| 54-301VS   | .414            | .055 ±.003 | .304 ±.005 | .00268 | 10.50                  | 1.40 | 7.70 |
| 51-313     | .415            | .051 ±.003 | .313 ±.005 | .00234 | 10.55                  | 1.30 | 7.95 |
| 70-275     | .415            | .070 ±.003 | .275 ±.005 | .00417 | 10.55                  | 1.80 | 7.00 |
| 70-270SS   | .417            | .071 ±.003 | .275 ±.005 | .00430 | 10.60                  | 1.80 | 7.00 |
| 25-356SS   | .418            | .026 ±.003 | .366 ±.005 | .00065 | 10.60                  | .65  | 9.30 |
| 75-262SS   | .418            | .076 ±.003 | .266 ±.005 | .00487 | 10.60                  | 1.95 | 6.75 |
| 42-335     | .419            | .042 ±.003 | .335 ±.005 | .00164 | 10.65                  | 1.05 | 8.50 |
| 60-301     | .421            | .060 ±.003 | .301 ±.005 | .00321 | 10.70                  | 1.50 | 7.65 |
| 75-268SS   | .423            | .076 ±.003 | .271 ±.005 | .00495 | 10.75                  | 1.95 | 6.90 |
| 1-903      | .429            | .064 ±.003 | .301 ±.005 | .00369 | 10.90                  | 1.65 | 7.65 |
| 76-277     | .429            | .076 ±.003 | .277 ±.005 | .00503 | 10.90                  | 1.95 | 7.05 |
| 50-330     | .430            | .050 ±.003 | .330 ±.005 | .00234 | 10.90                  | 1.25 | 8.40 |
| 139-152    | .430            | .139 ±.004 | .152 ±.005 | .01387 | 10.90                  | 3.55 | 3.85 |
| 35-361     | .431            | .035 ±.003 | .361 ±.005 | .00120 | 10.95                  | .90  | 9.15 |
| 70-291     | .431            | .070 ±.003 | .291 ±.005 | .00436 | 10.95                  | 1.80 | 7.40 |
| 35-362     | .432            | .035 ±.003 | .362 ±.005 | .00120 | 10.95                  | .90  | 9.20 |
| 39-354     | .432            | .039 ±.003 | .354 ±.005 | .00147 | 10.95                  | 1.00 | 9.00 |
| 70-285SS   | .432            | .071 ±.003 | .290 ±.005 | .00449 | 10.95                  | 1.80 | 7.35 |
| 30-368VS   | .433            | .030 ±.003 | .373 ±.005 | .00089 | 11.00                  | .75  | 9.45 |
| 118-197    | .433            | .118 ±.004 | .197 ±.005 | .01082 | 11.00                  | 3.00 | 5.00 |
| 59-311SS   | .434            | .060 ±.003 | .314 ±.005 | .00332 | 11.00                  | 1.50 | 8.00 |
| 45-346     | .436            | .045 ±.003 | .346 ±.005 | .00195 | 11.05                  | 1.15 | 8.80 |
| 93-250     | .436            | .093 ±.003 | .250 ±.005 | .00732 | 11.05                  | 2.35 | 6.35 |
| 89-255SS   | .439            | .090 ±.003 | .259 ±.005 | .00698 | 11.15                  | 2.30 | 6.60 |
| 30-380     | .440            | .030 ±.003 | .380 ±.005 | .00091 | 11.20                  | .75  | 9.65 |
| 1-011      | .441            | .070 ±.003 | .301 ±.005 | .00449 | 11.20                  | 1.80 | 7.65 |
| 94-248VS   | .441            | .095 ±.003 | .251 ±.005 | .00770 | 11.20                  | 2.40 | 6.40 |
| 1-108      | .443            | .103 ±.003 | .237 ±.005 | .00890 | 11.25                  | 2.60 | 6.00 |
| 122-200    | .444            | .122 ±.004 | .200 ±.005 | .01183 | 11.30                  | 3.10 | 5.10 |
| 63-319     | .445            | .063 ±.003 | .319 ±.005 | .00374 | 11.30                  | 1.60 | 8.10 |
| 71-304     | .446            | .071 ±.003 | .304 ±.005 | .00466 | 11.35                  | 1.80 | 7.70 |
| 150-145SVS | .448            | .151 ±.005 | .146 ±.005 | .01671 | 11.40                  | 3.85 | 3.70 |
| 1-201      | .449            | .139 ±.004 | .171 ±.005 | .01478 | 11.40                  | 3.55 | 4.35 |
| 40-370     | .450            | .040 ±.003 | .370 ±.005 | .00162 | 11.45                  | 1.00 | 9.40 |
| 63-319VS   | .450            | .064 ±.003 | .322 ±.005 | .00390 | 11.45                  | 1.65 | 8.20 |



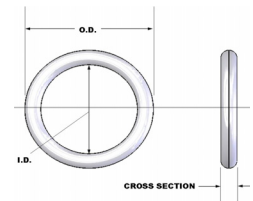
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 72-309    | .453            | .072 ±.003 | .309 ±.005 | .00487 | 11.50                  | 1.85 | 7.85  |
| 38-377    | .453            | .038 ±.003 | .377 ±.005 | .00148 | 11.50                  | .95  | 9.60  |
| 45-364    | .454            | .045 ±.003 | .364 ±.005 | .00204 | 11.55                  | 1.15 | 9.25  |
| 70-313ES  | .455            | .070 ±.003 | .315 ±.005 | .00465 | 11.55                  | 1.80 | 8.00  |
| 70-313VS  | .459            | .071 ±.003 | .317 ±.005 | .00483 | 11.65                  | 1.80 | 8.05  |
| 60-340    | .460            | .060 ±.003 | .340 ±.005 | .00355 | 11.70                  | 1.50 | 8.65  |
| 70-320    | .460            | .070 ±.003 | .320 ±.005 | .00472 | 11.70                  | 1.80 | 8.15  |
| 54-344SS  | .461            | .055 ±.003 | .351 ±.005 | .00303 | 11.70                  | 1.40 | 8.90  |
| 86-290    | .462            | .086 ±.003 | .290 ±.005 | .00686 | 11.75                  | 2.20 | 7.35  |
| 39-386    | .464            | .039 ±.003 | .386 ±.005 | .00159 | 11.80                  | 1.00 | 9.80  |
| 74-317    | .465            | .074 ±.003 | .317 ±.005 | .00528 | 11.80                  | 1.90 | 8.05  |
| 139-187   | .465            | .139 ±.004 | .187 ±.005 | .01554 | 11.80                  | 3.55 | 4.75  |
| 46-375    | .467            | .046 ±.003 | .375 ±.005 | .00220 | 11.85                  | 1.15 | 9.55  |
| 78-312    | .468            | .078 ±.003 | .312 ±.005 | .00585 | 11.90                  | 2.00 | 7.90  |
| 50-366SS  | .469            | .050 ±.003 | .369 ±.005 | .00258 | 11.90                  | 1.25 | 9.35  |
| 125-219   | .469            | .125 ±.004 | .219 ±.005 | .01326 | 11.90                  | 3.20 | 5.55  |
| 16-438    | .470            | .016 ±.003 | .438 ±.005 | .00029 | 11.95                  | .40  | 11.15 |
| 52-364SS  | .471            | .052 ±.003 | .367 ±.005 | .00280 | 11.95                  | 1.30 | 9.30  |
| 31-410    | .472            | .031 ±.003 | .410 ±.005 | .00105 | 12.00                  | .80  | 10.40 |
| 56-355VS  | .472            | .057 ±.003 | .358 ±.005 | .00333 | 12.00                  | 1.45 | 9.10  |
| 70-334    | .474            | .070 ±.003 | .334 ±.005 | .00488 | 12.05                  | 1.80 | 8.50  |
| 40-395    | .475            | .040 ±.003 | .395 ±.005 | .00172 | 12.05                  | 1.00 | 10.05 |
| 160-155   | .475            | .160 ±.005 | .155 ±.005 | .01990 | 12.05                  | 4.05 | 3.95  |
| 32-409SS  | .477            | .032 ±.003 | .413 ±.005 | .00112 | 12.10                  | .80  | 10.50 |
| 59-354SS  | .480            | .060 ±.003 | .360 ±.005 | .00373 | 12.20                  | 1.50 | 9.15  |
| 43-393ES  | .481            | .043 ±.003 | .395 ±.005 | .00200 | 12.20                  | 1.10 | 10.05 |
| 94-287VS  | .481            | .095 ±.003 | .291 ±.005 | .00860 | 12.20                  | 2.40 | 7.40  |
| 43-395ES  | .483            | .043 ±.003 | .397 ±.005 | .00201 | 12.25                  | 1.10 | 10.10 |
| 110-265NS | .484            | .110 ±.004 | .264 ±.005 | .01117 | 12.30                  | 2.80 | 6.70  |
| 104-272VS | .485            | .105 ±.003 | .275 ±.005 | .01034 | 12.30                  | 2.65 | 7.00  |
| 39-408    | .486            | .039 ±.003 | .408 ±.005 | .00168 | 12.35                  | 1.00 | 10.35 |
| 62-358SS  | .491            | .063 ±.003 | .365 ±.005 | .00419 | 12.45                  | 1.60 | 9.25  |
| 70-344SS  | .491            | .071 ±.003 | .349 ±.005 | .00522 | 12.45                  | 1.80 | 8.85  |
| 50-386SS  | .492            | .051 ±.003 | .390 ±.005 | .00283 | 12.50                  | 1.30 | 9.90  |
| 60-364SS  | .492            | .061 ±.003 | .370 ±.005 | .00396 | 12.50                  | 1.55 | 9.40  |
| 45-405    | .495            | .045 ±.003 | .405 ±.005 | .00225 | 12.55                  | 1.15 | 10.30 |
| 1-904     | .495            | .072 ±.003 | .351 ±.005 | .00541 | 12.55                  | 1.85 | 8.90  |
| 35-426    | .496            | .035 ±.003 | .426 ±.005 | .00139 | 12.60                  | .90  | 10.80 |
| 26-445    | .497            | .026 ±.002 | .445 ±.005 | .00079 | 12.60                  | .65  | 11.30 |
| 31-435    | .497            | .031 ±.003 | .435 ±.005 | .00110 | 12.60                  | .80  | 11.05 |
| 125-247   | .497            | .125 ±.004 | .247 ±.005 | .01434 | 12.60                  | 3.20 | 6.25  |
| 74-350    | .498            | .074 ±.003 | .350 ±.005 | .00573 | 12.65                  | 1.90 | 8.90  |
| 62-375    | .499            | .062 ±.003 | .375 ±.005 | .00414 | 12.65                  | 1.55 | 9.55  |
| 34-432    | .500            | .034 ±.003 | .432 ±.005 | .00133 | 12.70                  | .85  | 10.95 |
| 50-397SS  | .501            | .050 ±.003 | .401 ±.005 | .00278 | 12.75                  | 1.25 | 10.20 |



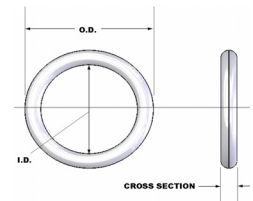
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 54-394    | .502            | .054 ±.003 | .394 ±.005 | .00322 | 12.75                  | 1.35 | 10.00 |
| 73-357    | .503            | .073 ±.003 | .357 ±.005 | .00565 | 12.80                  | 1.85 | 9.05  |
| 79-335SS  | .503            | .081 ±.003 | .341 ±.005 | .00683 | 12.80                  | 2.05 | 8.65  |
| 1-012     | .504            | .070 ±.003 | .364 ±.005 | .00525 | 12.80                  | 1.80 | 9.25  |
| 68-364SS  | .505            | .069 ±.003 | .367 ±.005 | .00512 | 12.85                  | 1.75 | 9.30  |
| 1-109     | .505            | .103 ±.003 | .299 ±.005 | .01052 | 12.85                  | 2.60 | 7.60  |
| 40-426    | .506            | .040 ±.003 | .426 ±.005 | .00184 | 12.85                  | 1.00 | 10.80 |
| 97-312    | .506            | .097 ±.003 | .312 ±.005 | .00950 | 12.85                  | 2.45 | 7.90  |
| 187-130ES | .506            | .188 ±.005 | .130 ±.005 | .02773 | 12.85                  | 4.80 | 3.30  |
| 86-336    | .508            | .086 ±.003 | .336 ±.005 | .00770 | 12.90                  | 2.20 | 8.55  |
| 71-367    | .509            | .071 ±.003 | .367 ±.005 | .00545 | 12.95                  | 1.80 | 9.30  |
| 90-324VS  | .510            | .091 ±.003 | .328 ±.005 | .00856 | 12.95                  | 2.30 | 8.35  |
| 39-433    | .511            | .039 ±.003 | .433 ±.005 | .00177 | 13.00                  | 1.00 | 11.00 |
| 1-202     | .512            | .139 ±.004 | .234 ±.005 | .01778 | 13.00                  | 3.55 | 5.95  |
| 28-457    | .513            | .028 ±.003 | .457 ±.005 | .00094 | 13.05                  | .70  | 11.60 |
| 70-373ES  | .514            | .070 ±.003 | .374 ±.005 | .00537 | 13.05                  | 1.80 | 9.50  |
| 45-426    | .516            | .045 ±.003 | .426 ±.005 | .00235 | 13.10                  | 1.15 | 10.80 |
| 74-362VS  | .517            | .075 ±.003 | .367 ±.005 | .00613 | 13.15                  | 1.90 | 9.30  |
| 45-425ES  | .518            | .045 ±.003 | .428 ±.005 | .00236 | 13.15                  | 1.15 | 10.85 |
| 103-312   | .518            | .103 ±.003 | .312 ±.005 | .01086 | 13.15                  | 2.60 | 7.90  |
| 28-457VS  | .519            | .028 ±.003 | .463 ±.005 | .00095 | 13.20                  | .70  | 11.75 |
| 110-299   | .519            | .110 ±.004 | .299 ±.005 | .01221 | 13.20                  | 2.80 | 7.60  |
| 24-472    | .520            | .024 ±.003 | .472 ±.005 | .00070 | 13.20                  | .60  | 12.00 |
| 40-440    | .520            | .040 ±.003 | .440 ±.005 | .00189 | 13.20                  | 1.00 | 11.20 |
| 95-320SS  | .520            | .097 ±.003 | .326 ±.005 | .00982 | 13.20                  | 2.45 | 8.30  |
| 108-305   | .521            | .108 ±.004 | .305 ±.005 | .01189 | 13.25                  | 2.75 | 7.75  |
| 178-165   | .521            | .178 ±.005 | .165 ±.005 | .02681 | 13.25                  | 4.50 | 4.20  |
| 79-354SS  | .523            | .081 ±.003 | .361 ±.005 | .00716 | 13.30                  | 2.05 | 9.15  |
| 62-400    | .524            | .062 ±.003 | .400 ±.005 | .00438 | 13.30                  | 1.55 | 10.15 |
| 80-364    | .524            | .080 ±.003 | .364 ±.005 | .00701 | 13.30                  | 2.05 | 9.25  |
| 50-426    | .526            | .050 ±.003 | .426 ±.005 | .00294 | 13.35                  | 1.25 | 10.80 |
| 30-468    | .528            | .030 ±.003 | .468 ±.005 | .00111 | 13.40                  | .75  | 11.90 |
| 40-445SS  | .529            | .040 ±.003 | .449 ±.005 | .00193 | 13.45                  | 1.00 | 11.40 |
| 74-375VS  | .529            | .075 ±.003 | .379 ±.005 | .00630 | 13.45                  | 1.90 | 9.65  |
| 156-218   | .530            | .156 ±.005 | .218 ±.005 | .02246 | 13.45                  | 3.95 | 5.55  |
| 80-364VS  | .531            | .081 ±.003 | .369 ±.005 | .00728 | 13.50                  | 2.05 | 9.35  |
| 56-414SS  | .532            | .057 ±.003 | .418 ±.005 | .00381 | 13.50                  | 1.45 | 10.60 |
| 103-326   | .532            | .103 ±.003 | .326 ±.005 | .01123 | 13.50                  | 2.60 | 8.30  |
| 76-382    | .534            | .076 ±.003 | .382 ±.005 | .00653 | 13.55                  | 1.95 | 9.70  |
| 40-445RS  | .535            | .041 ±.003 | .453 ±.005 | .00205 | 13.60                  | 1.05 | 11.50 |
| 59-416ES  | .535            | .059 ±.003 | .417 ±.005 | .00409 | 13.60                  | 1.50 | 10.60 |
| 70-395    | .535            | .070 ±.003 | .395 ±.005 | .00562 | 13.60                  | 1.80 | 10.05 |
| 79-370SS  | .535            | .080 ±.003 | .375 ±.005 | .00719 | 13.60                  | 2.05 | 9.55  |
| 36-465    | .537            | .036 ±.003 | .465 ±.005 | .00160 | 13.65                  | .90  | 11.80 |
| 42-451ES  | .538            | .042 ±.003 | .454 ±.005 | .00216 | 13.65                  | 1.05 | 11.55 |



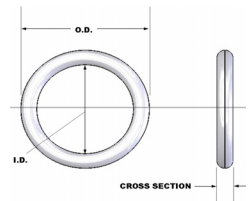
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 74-382SS  | .538            | .075 ±.003 | .388 ±.005 | .00643 | 13.65                  | 1.90 | 9.85  |
| 40-459    | .539            | .040 ±.003 | .459 ±.005 | .00197 | 13.70                  | 1.00 | 11.65 |
| 53-429SS  | .539            | .053 ±.003 | .433 ±.005 | .00337 | 13.70                  | 1.35 | 11.00 |
| 87-366    | .540            | .087 ±.003 | .366 ±.005 | .00846 | 13.70                  | 2.20 | 9.30  |
| 46-450    | .542            | .046 ±.003 | .450 ±.005 | .00259 | 13.75                  | 1.15 | 11.45 |
| 75-386VS  | .542            | .076 ±.003 | .390 ±.005 | .00664 | 13.75                  | 1.95 | 9.90  |
| 46-453    | .545            | .046 ±.003 | .453 ±.005 | .00261 | 13.85                  | 1.15 | 11.50 |
| 26-492VS  | .549            | .026 ±.003 | .497 ±.004 | .00087 | 13.95                  | .65  | 12.60 |
| 52-447    | .551            | .052 ±.003 | .447 ±.005 | .00333 | 14.00                  | 1.30 | 11.35 |
| 59-433    | .551            | .059 ±.033 | .433 ±.005 | .00423 | 14.00                  | 1.50 | 11.00 |
| 20-515    | .555            | .020 ±.003 | .515 ±.005 | .00053 | 14.10                  | .50  | 13.10 |
| 74-401VS  | .555            | .075 ±.003 | .405 ±.005 | .00666 | 14.10                  | 1.90 | 10.30 |
| 30-496    | .556            | .030 ±.003 | .496 ±.005 | .00117 | 14.10                  | .75  | 12.60 |
| 25-507    | .557            | .025 ±.003 | .507 ±.005 | .00082 | 14.15                  | .65  | 12.90 |
| 1-905     | .558            | .072 ±.003 | .414 ±.005 | .00622 | 14.15                  | 1.85 | 10.50 |
| 94-366SS  | .559            | .095 ±.003 | .369 ±.005 | .01033 | 14.20                  | 2.40 | 9.35  |
| 80-400    | .560            | .080 ±.003 | .400 ±.005 | .00758 | 14.20                  | 2.05 | 10.15 |
| 93-375    | .561            | .093 ±.003 | .375 ±.005 | .00999 | 14.25                  | 2.35 | 9.55  |
| 140-281   | .561            | .140 ±.004 | .281 ±.005 | .02036 | 14.25                  | 3.55 | 7.15  |
| 91-380    | .562            | .091 ±.003 | .380 ±.005 | .00962 | 14.25                  | 2.30 | 9.65  |
| 40-484    | .564            | .040 ±.003 | .484 ±.005 | .00207 | 14.35                  | 1.00 | 12.30 |
| 53-458    | .564            | .053 ±.003 | .458 ±.005 | .00354 | 14.35                  | 1.35 | 11.65 |
| 1-013     | .566            | .070 ±.003 | .426 ±.005 | .00600 | 14.40                  | 1.80 | 10.80 |
| 80-406    | .566            | .080 ±.003 | .406 ±.005 | .00767 | 14.40                  | 2.05 | 10.30 |
| 70-418SS  | .567            | .071 ±.003 | .425 ±.005 | .00617 | 14.40                  | 1.80 | 10.80 |
| 50-468    | .568            | .050 ±.003 | .468 ±.005 | .00320 | 14.45                  | 1.25 | 11.90 |
| 1-110     | .568            | .103 ±.003 | .362 ±.005 | .01217 | 14.45                  | 2.60 | 9.20  |
| 39-492    | .570            | .039 ±.003 | .492 ±.005 | .00199 | 14.50                  | 1.00 | 12.50 |
| 164-242   | .570            | .164 ±.005 | .242 ±.005 | .02694 | 14.50                  | 4.15 | 6.15  |
| 21-524VS  | .570            | .021 ±.003 | .528 ±.005 | .00060 | 14.50                  | .55  | 13.40 |
| 41-490    | .572            | .041 ±.003 | .490 ±.005 | .00220 | 14.55                  | 1.05 | 12.45 |
| 71-430    | .572            | .071 ±.003 | .430 ±.005 | .00623 | 14.55                  | 1.80 | 10.90 |
| 104-366   | .574            | .104 ±.003 | .366 ±.005 | .01254 | 14.60                  | 2.65 | 9.30  |
| 125-327   | .576            | .125 ±.004 | .326 ±.005 | .01739 | 14.65                  | 3.20 | 8.30  |
| 59-453VS  | .577            | .060 ±.003 | .457 ±.005 | .00459 | 14.65                  | 1.50 | 11.60 |
| 70-437    | .577            | .070 ±.003 | .437 ±.005 | .00613 | 14.65                  | 1.80 | 11.10 |
| 1-203     | .579            | .139 ±.004 | .296 ±.005 | .02098 | 14.70                  | 3.55 | 7.50  |
| 50-475SS  | .580            | .050 ±.003 | .480 ±.005 | .00327 | 14.70                  | 1.25 | 12.20 |
| 60-460    | .580            | .060 ±.003 | .460 ±.005 | .00462 | 14.75                  | 1.50 | 11.70 |
| 68-438SS  | .582            | .069 ±.003 | .444 ±.005 | .00603 | 14.80                  | 1.75 | 11.30 |
| 135-312   | .582            | .135 ±.004 | .312 ±.005 | .02010 | 14.80                  | 3.45 | 7.90  |
| 43-495TS  | .583            | .043 ±.003 | .497 ±.005 | .00246 | 14.80                  | 1.10 | 12.60 |
| 76-432    | .584            | .076 ±.003 | .432 ±.005 | .00724 | 14.85                  | 1.95 | 10.95 |
| 92-400    | .584            | .092 ±.003 | .400 ±.005 | .01027 | 14.85                  | 2.35 | 10.15 |
| 40-504ES  | .586            | .040 ±.003 | .506 ±.005 | .00216 | 14.90                  | 1.00 | 12.85 |



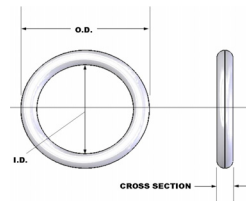
# Engineers Guide for O-Rings



| Mold IDen        | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|------------------|-----------------|------------|------------|--------|------------------------|------|-------|
|                  | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| <b>103-374VS</b> | .586            | .104 ±.003 | .378 ±.005 | .01286 | 14.90                  | 2.65 | 9.60  |
| <b>40-508NS</b>  | .586            | .040 ±.003 | .506 ±.005 | .00216 | 14.90                  | 1.00 | 12.85 |
| <b>106-375</b>   | .587            | .106 ±.003 | .375 ±.005 | .01334 | 14.90                  | 2.70 | 9.55  |
| <b>174-239</b>   | .587            | .174 ±.005 | .239 ±.005 | .03085 | 14.90                  | 4.40 | 6.05  |
| <b>31-526</b>    | .588            | .031 ±.003 | .526 ±.005 | .00132 | 14.95                  | .80  | 13.35 |
| <b>118-352</b>   | .588            | .118 ±.004 | .352 ±.005 | .01615 | 14.95                  | 3.00 | 8.95  |
| <b>59-472</b>    | .590            | .059 ±.003 | .472 ±.005 | .00456 | 15.00                  | 1.50 | 12.00 |
| <b>47-490SS</b>  | .592            | .048 ±.003 | .496 ±.005 | .00309 | 15.05                  | 1.20 | 12.60 |
| <b>90-401SS</b>  | .593            | .092 ±.003 | .409 ±.005 | .01046 | 15.05                  | 2.35 | 10.40 |
| <b>188-218</b>   | .594            | .188 ±.005 | .218 ±.005 | .03541 | 15.10                  | 4.80 | 5.55  |
| <b>70-455</b>    | .595            | .070 ±.003 | .455 ±.005 | .00635 | 15.10                  | 1.80 | 11.55 |
| <b>103-391</b>   | .597            | .103 ±.003 | .391 ±.005 | .01293 | 15.15                  | 2.60 | 9.95  |
| <b>125-348</b>   | .598            | .125 ±.004 | .348 ±.005 | .01824 | 15.20                  | 3.20 | 8.85  |
| <b>55-489</b>    | .599            | .055 ±.003 | .489 ±.005 | .00406 | 15.20                  | 1.40 | 12.40 |
| <b>70-460</b>    | .600            | .070 ±.003 | .460 ±.005 | .00641 | 15.25                  | 1.80 | 11.70 |
| <b>125-343SS</b> | .604            | .126 ±.004 | .352 ±.005 | .01872 | 15.35                  | 3.20 | 8.95  |
| <b>49-508</b>    | .606            | .049 ±.003 | .508 ±.005 | .00330 | 15.40                  | 1.25 | 12.90 |
| <b>70-466</b>    | .606            | .070 ±.003 | .466 ±.005 | .00648 | 15.40                  | 1.80 | 11.85 |
| <b>95-418</b>    | .608            | .095 ±.003 | .418 ±.005 | .01142 | 15.45                  | 2.40 | 10.60 |
| <b>150-310</b>   | .610            | .150 ±.005 | .310 ±.005 | .02554 | 15.50                  | 3.80 | 7.85  |
| <b>119-374</b>   | .612            | .119 ±.004 | .374 ±.005 | .01723 | 15.55                  | 3.00 | 9.50  |
| <b>39-535</b>    | .613            | .039 ±.003 | .535 ±.005 | .00215 | 15.55                  | 1.00 | 13.60 |
| <b>70-468SS</b>  | .614            | .071 ±.003 | .472 ±.005 | .00675 | 15.60                  | 1.80 | 12.00 |
| <b>84-446</b>    | .614            | .084 ±.003 | .446 ±.005 | .00923 | 15.60                  | 2.15 | 11.35 |
| <b>80-443SS</b>  | .616            | .082 ±.003 | .452 ±.005 | .00886 | 15.65                  | 2.10 | 11.50 |
| <b>87-445</b>    | .619            | .087 ±.003 | .445 ±.005 | .00994 | 15.70                  | 2.20 | 11.30 |
| <b>32-551SS</b>  | .620            | .032 ±.003 | .556 ±.007 | .00149 | 15.75                  | .80  | 14.10 |
| <b>32-551VS</b>  | .621            | .032 ±.003 | .557 ±.007 | .00149 | 15.75                  | .80  | 14.15 |
| <b>79-450SS</b>  | .621            | .081 ±.003 | .459 ±.005 | .00874 | 15.75                  | 2.05 | 11.65 |
| <b>70-478VS</b>  | .624            | .071 ±.003 | .482 ±.005 | .00688 | 15.85                  | 1.80 | 12.25 |
| <b>1-906</b>     | .624            | .078 ±.003 | .468 ±.005 | .00820 | 15.85                  | 2.00 | 11.90 |
| <b>84-456</b>    | .624            | .084 ±.003 | .456 ±.005 | .00940 | 15.85                  | 2.15 | 11.60 |
| <b>93-437ES</b>  | .624            | .093 ±.003 | .438 ±.005 | .01133 | 15.85                  | 2.35 | 11.15 |
| <b>125-375</b>   | .625            | .125 ±.004 | .375 ±.005 | .01928 | 15.90                  | 3.20 | 9.55  |
| <b>195-235</b>   | .625            | .195 ±.005 | .235 ±.005 | .04034 | 15.90                  | 4.95 | 5.95  |
| <b>20-583ES</b>  | .627            | .020 ±.003 | .587 ±.007 | .00060 | 15.95                  | .50  | 14.90 |
| <b>60-507</b>    | .627            | .060 ±.003 | .507 ±.005 | .00504 | 15.95                  | 1.50 | 12.90 |
| <b>1-014</b>     | .629            | .070 ±.003 | .489 ±.005 | .00676 | 16.00                  | 1.80 | 12.40 |
| <b>40-550</b>    | .630            | .040 ±.003 | .550 ±.005 | .00233 | 16.00                  | 1.00 | 13.95 |
| <b>70-487VS</b>  | .630            | .070 ±.003 | .490 ±.005 | .00677 | 16.00                  | 1.80 | 12.45 |
| <b>1-111</b>     | .630            | .103 ±.003 | .424 ±.005 | .01380 | 16.00                  | 2.60 | 10.75 |
| <b>60-507ES</b>  | .631            | .060 ±.003 | .511 ±.005 | .00507 | 16.05                  | 1.50 | 13.00 |
| <b>103-425</b>   | .631            | .103 ±.003 | .425 ±.005 | .01382 | 16.05                  | 2.60 | 10.80 |
| <b>104-417VS</b> | .631            | .105 ±.003 | .421 ±.005 | .01431 | 16.05                  | 2.65 | 10.70 |
| <b>62-501SS</b>  | .634            | .063 ±.003 | .508 ±.005 | .00559 | 16.10                  | 1.60 | 12.90 |



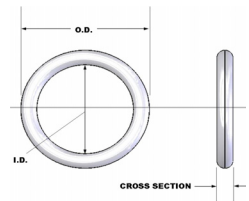
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 79-472VS  | .634            | .079 ±.003 | .476 ±.005 | .00855 | 16.10                  | 2.00 | 12.10 |
| 20-595    | .635            | .020 ±.003 | .595 ±.007 | .00061 | 16.15                  | .50  | 15.10 |
| 32-566VS  | .635            | .032 ±.003 | .571 ±.007 | .00152 | 16.15                  | .80  | 14.50 |
| 77-468SS  | .636            | .079 ±.003 | .478 ±.005 | .00858 | 16.15                  | 2.00 | 12.15 |
| 30-577    | .637            | .030 ±.003 | .577 ±.007 | .00135 | 16.20                  | .75  | 14.65 |
| 39-550VS  | .637            | .040 ±.003 | .557 ±.007 | .00236 | 16.20                  | 1.00 | 14.15 |
| 71-495    | .637            | .071 ±.003 | .495 ±.005 | .00704 | 16.20                  | 1.80 | 12.55 |
| 1-204     | .637            | .139 ±.004 | .359 ±.005 | .02374 | 16.20                  | 3.55 | 9.10  |
| 55-530    | .640            | .055 ±.003 | .530 ±.005 | .00437 | 16.25                  | 1.40 | 13.45 |
| 51-531ES  | .641            | .052 ±.003 | .537 ±.005 | .00393 | 16.30                  | 1.30 | 13.65 |
| 94-445VS  | .641            | .095 ±.003 | .451 ±.005 | .01216 | 16.30                  | 2.40 | 11.45 |
| 70-505    | .645            | .070 ±.003 | .505 ±.005 | .00695 | 16.40                  | 1.80 | 12.85 |
| 70-495SS  | .645            | .071 ±.003 | .503 ±.005 | .00714 | 16.40                  | 1.80 | 12.80 |
| 39-570    | .648            | .039 ±.003 | .570 ±.007 | .00229 | 16.45                  | 1.00 | 14.50 |
| 51-547    | .649            | .051 ±.003 | .547 ±.005 | .00384 | 16.50                  | 1.30 | 13.90 |
| 59-531    | .649            | .059 ±.003 | .531 ±.008 | .00507 | 16.50                  | 1.50 | 13.50 |
| 75-489SS  | .650            | .076 ±.003 | .498 ±.005 | .00818 | 16.50                  | 1.95 | 12.65 |
| 70-489SS  | .654            | .073 ±.003 | .508 ±.005 | .00764 | 16.60                  | 1.85 | 12.90 |
| 110-438   | .658            | .110 ±.004 | .438 ±.005 | .01636 | 16.70                  | 2.80 | 11.15 |
| 190-280   | .660            | .190 ±.005 | .280 ±.005 | .04186 | 16.75                  | 4.85 | 7.10  |
| 51-547VS  | .661            | .052 ±.003 | .557 ±.007 | .00406 | 16.80                  | 1.30 | 14.15 |
| 103-456   | .662            | .103 ±.003 | .456 ±.005 | .01463 | 16.80                  | 2.60 | 11.60 |
| 40-583VS  | .667            | .040 ±.003 | .587 ±.005 | .00248 | 16.95                  | 1.00 | 14.90 |
| 197-276   | .670            | .197 ±.005 | .276 ±.005 | .04529 | 17.00                  | 5.00 | 7.00  |
| 156-359   | .671            | .156 ±.005 | .359 ±.005 | .03092 | 17.05                  | 3.95 | 9.10  |
| 70-518SS  | .673            | .072 ±.003 | .529 ±.005 | .00769 | 17.10                  | 1.85 | 13.45 |
| 142-390NS | .673            | .142 ±.004 | .389 ±.005 | .02642 | 17.10                  | 3.60 | 9.90  |
| 71-525SS  | .677            | .072 ±.003 | .533 ±.005 | .00774 | 17.20                  | 1.85 | 13.55 |
| 30-622    | .682            | .030 ±.003 | .622 ±.009 | .00145 | 17.30                  | .75  | 15.80 |
| 34-611ES  | .685            | .034 ±.003 | .617 ±.009 | .00186 | 17.40                  | .85  | 15.65 |
| 120-445   | .685            | .120 ±.004 | .445 ±.005 | .02007 | 17.40                  | 3.05 | 11.30 |
| 130-425   | .685            | .130 ±.004 | .425 ±.005 | .02314 | 17.40                  | 3.30 | 10.80 |
| 93-500    | .686            | .093 ±.003 | .500 ±.005 | .01265 | 17.40                  | 2.35 | 12.70 |
| 118-453   | .689            | .118 ±.004 | .453 ±.005 | .01962 | 17.50                  | 3.00 | 11.50 |
| 50-590    | .690            | .050 ±.003 | .590 ±.007 | .00395 | 17.55                  | 1.25 | 15.00 |
| 30-622SS  | .691            | .030 ±.003 | .631 ±.009 | .00147 | 17.55                  | .75  | 16.05 |
| 1-015     | .691            | .070 ±.003 | .551 ±.007 | .00751 | 17.55                  | 1.80 | 14.00 |
| 40-612    | .692            | .040 ±.003 | .612 ±.007 | .00257 | 17.60                  | 1.00 | 15.55 |
| 106-480   | .692            | .106 ±.003 | .480 ±.005 | .01625 | 17.60                  | 2.70 | 12.20 |
| 1-112     | .693            | .103 ±.003 | .487 ±.005 | .01544 | 17.60                  | 2.60 | 12.35 |
| 1-907     | .694            | .082 ±.003 | .530 ±.005 | .01015 | 17.65                  | 2.10 | 13.45 |
| 60-575    | .695            | .060 ±.003 | .575 ±.007 | .00564 | 17.65                  | 1.50 | 14.60 |
| 139-417   | .695            | .139 ±.004 | .417 ±.005 | .02651 | 17.65                  | 3.55 | 10.60 |
| 87-524    | .698            | .087 ±.003 | .524 ±.005 | .01141 | 17.75                  | 2.20 | 13.30 |
| 105-485PL | .699            | .106 ±.003 | .487 ±.005 | .01644 | 17.75                  | 2.70 | 12.35 |



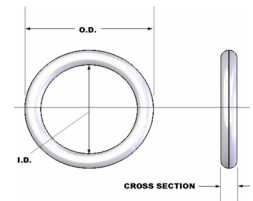
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 1-205     | .699            | .139 ±.004 | .421 ±.005 | .02670 | 17.75                  | 3.55 | 10.70 |
| 32-630SS  | .699            | .032 ±.003 | .635 ±.009 | .00169 | 17.75                  | .80  | 16.15 |
| 71-557    | .699            | .071 ±.003 | .557 ±.007 | .00781 | 17.75                  | 1.80 | 14.15 |
| 104-492   | .700            | .104 ±.003 | .492 ±.005 | .01591 | 17.80                  | 2.65 | 12.50 |
| 113-477   | .703            | .113 ±.004 | .477 ±.005 | .01859 | 17.85                  | 2.85 | 12.10 |
| 31-643    | .705            | .031 ±.003 | .643 ±.009 | .00160 | 17.90                  | .80  | 16.35 |
| 110-487   | .707            | .110 ±.004 | .487 ±.005 | .01782 | 17.95                  | 2.80 | 12.35 |
| 39-630    | .708            | .039 ±.003 | .630 ±.009 | .00251 | 18.00                  | 1.00 | 16.00 |
| 98-512    | .708            | .098 ±.003 | .512 ±.005 | .01446 | 18.00                  | 2.50 | 13.00 |
| 79-551    | .709            | .079 ±.003 | .551 ±.007 | .00970 | 18.00                  | 2.00 | 14.00 |
| 132-445   | .709            | .132 ±.004 | .445 ±.005 | .02481 | 18.00                  | 3.35 | 11.30 |
| 39-636NS  | .711            | .039 ±.003 | .633 ±.009 | .00252 | 18.05                  | 1.00 | 16.10 |
| 94-523    | .711            | .094 ±.003 | .523 ±.005 | .01345 | 18.05                  | 2.40 | 13.30 |
| 47-618    | .712            | .047 ±.003 | .618 ±.009 | .00362 | 18.10                  | 1.20 | 15.70 |
| 59-602    | .720            | .059 ±.003 | .602 ±.007 | .00568 | 18.30                  | 1.50 | 15.30 |
| 100-520   | .720            | .100 ±.003 | .520 ±.005 | .01530 | 18.30                  | 2.55 | 13.20 |
| 45-632    | .722            | .045 ±.003 | .632 ±.009 | .00338 | 18.35                  | 1.15 | 16.05 |
| 70-583    | .723            | .070 ±.003 | .583 ±.007 | .00789 | 18.35                  | 1.80 | 14.80 |
| 50-625    | .725            | .050 ±.003 | .625 ±.009 | .00416 | 18.40                  | 1.25 | 15.90 |
| 47-632    | .726            | .047 ±.003 | .632 ±.009 | .00370 | 18.45                  | 1.20 | 16.05 |
| 58-610    | .726            | .058 ±.003 | .610 ±.007 | .00554 | 18.45                  | 1.45 | 15.50 |
| 80-551SS  | .726            | .082 ±.003 | .562 ±.007 | .01068 | 18.45                  | 2.10 | 14.25 |
| 70-575SS  | .727            | .071 ±.003 | .585 ±.007 | .00816 | 18.45                  | 1.80 | 14.85 |
| 121-485   | .727            | .121 ±.004 | .485 ±.005 | .02189 | 18.45                  | 3.05 | 12.30 |
| 20-685VS  | .729            | .020 ±.003 | .689 ±.009 | .00070 | 18.50                  | .50  | 17.50 |
| 98-520SS  | .730            | .100 ±.003 | .530 ±.005 | .01554 | 18.55                  | 2.55 | 13.45 |
| 43-642SS  | .732            | .043 ±.003 | .646 ±.009 | .00314 | 18.60                  | 1.10 | 16.40 |
| 139-452   | .732            | .140 ±.004 | .452 ±.005 | .02863 | 18.60                  | 3.55 | 11.50 |
| 63-594SS  | .733            | .064 ±.003 | .605 ±.007 | .00676 | 18.60                  | 1.65 | 15.35 |
| 68-598    | .734            | .068 ±.003 | .598 ±.007 | .00760 | 18.65                  | 1.75 | 15.20 |
| 180-375   | .735            | .180 ±.005 | .375 ±.005 | .04437 | 18.65                  | 4.55 | 9.55  |
| 52-632    | .736            | .052 ±.003 | .632 ±.009 | .00456 | 18.70                  | 1.30 | 16.05 |
| 70-590VS  | .738            | .071 ±.003 | .596 ±.007 | .00830 | 18.75                  | 1.80 | 15.15 |
| 40-660    | .740            | .040 ±.003 | .660 ±.009 | .00276 | 18.80                  | 1.00 | 16.75 |
| 50-640ES  | .744            | .050 ±.003 | .644 ±.009 | .00428 | 18.90                  | 1.25 | 16.35 |
| 56-632    | .744            | .056 ±.003 | .632 ±.009 | .00532 | 18.90                  | 1.40 | 16.05 |
| 79-591NS  | .747            | .079 ±.003 | .589 ±.007 | .01029 | 18.95                  | 2.00 | 14.95 |
| 46-656    | .748            | .046 ±.003 | .656 ±.009 | .00367 | 19.00                  | 1.15 | 16.65 |
| 148-453   | .749            | .148 ±.005 | .453 ±.005 | .03248 | 19.00                  | 3.75 | 11.50 |
| 30-690    | .750            | .030 ±.003 | .690 ±.009 | .00160 | 19.05                  | .75  | 17.55 |
| 125-500   | .750            | .125 ±.004 | .500 ±.005 | .02410 | 19.05                  | 3.20 | 12.70 |
| 1-016     | .754            | .070 ±.003 | .614 ±.009 | .00827 | 19.15                  | 1.80 | 15.60 |
| 174-406   | .754            | .174 ±.005 | .406 ±.005 | .04333 | 19.15                  | 4.40 | 10.30 |
| 1-113     | .755            | .103 ±.003 | .549 ±.007 | .01707 | 19.20                  | 2.60 | 13.95 |
| 62-638    | .762            | .062 ±.003 | .638 ±.009 | .00664 | 19.35                  | 1.55 | 16.20 |



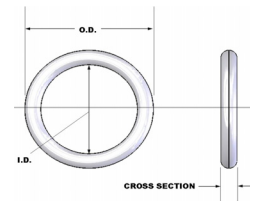
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 71-620    | .762            | .071 ±.003 | .620 ±.009 | .00859 | 19.35                  | 1.80 | 15.75 |
| 74-614    | .762            | .074 ±.003 | .614 ±.009 | .00930 | 19.35                  | 1.90 | 15.60 |
| 1-206     | .762            | .139 ±.004 | .484 ±.005 | .02970 | 19.35                  | 3.55 | 12.30 |
| 104-557   | .765            | .104 ±.003 | .557 ±.007 | .01764 | 19.45                  | 2.65 | 14.15 |
| 113-539   | .765            | .113 ±.004 | .539 ±.005 | .02054 | 19.45                  | 2.85 | 13.70 |
| 77-614    | .768            | .077 ±.003 | .614 ±.009 | .01011 | 19.50                  | 1.95 | 15.60 |
| 1-308     | .770            | .210 ±.005 | .350 ±.005 | .06093 | 19.55                  | 5.35 | 8.90  |
| 57-658    | .772            | .057 ±.003 | .658 ±.009 | .00573 | 19.60                  | 1.45 | 16.70 |
| 83-606    | .772            | .083 ±.003 | .606 ±.007 | .01171 | 19.60                  | 2.10 | 15.40 |
| 92-590    | .774            | .092 ±.003 | .590 ±.007 | .01424 | 19.65                  | 2.35 | 15.00 |
| 112-549ES | .774            | .112 ±.004 | .550 ±.007 | .02049 | 19.65                  | 2.85 | 13.95 |
| 87-602    | .776            | .087 ±.003 | .602 ±.007 | .01287 | 19.70                  | 2.20 | 15.30 |
| 151-477   | .779            | .151 ±.005 | .477 ±.005 | .03533 | 19.80                  | 3.85 | 12.10 |
| 109-562   | .780            | .109 ±.004 | .562 ±.007 | .01967 | 19.80                  | 2.75 | 14.25 |
| 40-701    | .781            | .040 ±.003 | .701 ±.009 | .00293 | 19.85                  | 1.00 | 17.80 |
| 106-570   | .782            | .106 ±.003 | .570 ±.007 | .01874 | 19.85                  | 2.70 | 14.50 |
| 210-362   | .782            | .210 ±.005 | .362 ±.005 | .06224 | 19.85                  | 5.35 | 9.20  |
| 46-691    | .783            | .046 ±.003 | .691 ±.009 | .00385 | 19.90                  | 1.15 | 17.55 |
| 184-417   | .785            | .184 ±.005 | .417 ±.005 | .05021 | 19.95                  | 4.65 | 10.60 |
| 70-646    | .786            | .070 ±.003 | .646 ±.009 | .00866 | 19.95                  | 1.80 | 16.40 |
| 165-456   | .786            | .165 ±.005 | .456 ±.005 | .04172 | 19.95                  | 4.20 | 11.60 |
| 59-669    | .787            | .059 ±.003 | .669 ±.009 | .00625 | 20.00                  | 1.50 | 17.00 |
| 98-591    | .787            | .098 ±.003 | .591 ±.007 | .01633 | 20.00                  | 2.50 | 15.00 |
| 64-660    | .788            | .064 ±.003 | .660 ±.009 | .00732 | 20.00                  | 1.65 | 16.75 |
| 92-590SS  | .789            | .094 ±.003 | .601 ±.007 | .01515 | 20.05                  | 2.40 | 15.25 |
| 180-429   | .789            | .180 ±.005 | .429 ±.005 | .04869 | 20.05                  | 4.55 | 10.90 |
| 56-670SS  | .790            | .057 ±.003 | .676 ±.009 | .00588 | 20.05                  | 1.45 | 17.15 |
| 70-652    | .792            | .070 ±.003 | .652 ±.009 | .00873 | 20.10                  | 1.80 | 16.55 |
| 160-472   | .792            | .160 ±.005 | .472 ±.005 | .03992 | 20.10                  | 4.05 | 12.00 |
| 79-623SS  | .794            | .080 ±.003 | .634 ±.009 | .01128 | 20.15                  | 2.05 | 16.10 |
| 95-590SS  | .795            | .097 ±.003 | .601 ±.007 | .01620 | 20.20                  | 2.45 | 15.25 |
| 139-515   | .795            | .140 ±.004 | .515 ±.005 | .03168 | 20.20                  | 3.55 | 13.10 |
| 103-590   | .796            | .103 ±.003 | .590 ±.007 | .01814 | 20.20                  | 2.60 | 15.00 |
| 46-705    | .797            | .046 ±.003 | .705 ±.009 | .00392 | 20.25                  | 1.15 | 17.90 |
| 79-630SS  | .797            | .080 ±.003 | .637 ±.009 | .01132 | 20.25                  | 2.05 | 16.20 |
| 138-523   | .799            | .138 ±.004 | .523 ±.005 | .03106 | 20.30                  | 3.50 | 13.30 |
| 70-646SS  | .800            | .071 ±.003 | .658 ±.009 | .00907 | 20.30                  | 1.80 | 16.70 |
| 36-732    | .802            | .036 ±.003 | .730 ±.009 | .00245 | 20.35                  | .90  | 18.55 |
| 169-465   | .803            | .169 ±.005 | .465 ±.005 | .04468 | 20.40                  | 4.30 | 11.80 |
| 63-670SS  | .804            | .064 ±.003 | .676 ±.009 | .00748 | 20.40                  | 1.65 | 17.15 |
| 40-725    | .805            | .040 ±.003 | .725 ±.009 | .00302 | 20.45                  | 1.00 | 18.40 |
| 95-618    | .808            | .095 ±.003 | .618 ±.009 | .01588 | 20.50                  | 2.40 | 15.70 |
| 105-605   | .815            | .105 ±.003 | .605 ±.007 | .01931 | 20.70                  | 2.65 | 15.35 |
| 57-690VS  | .816            | .058 ±.003 | .700 ±.009 | .00629 | 20.75                  | 1.45 | 17.80 |
| 1-017     | .816            | .070 ±.003 | .676 ±.009 | .00902 | 20.75                  | 1.80 | 17.15 |



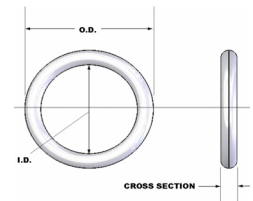
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 94-614SS  | .816            | .096 ±.003 | .624 ±.009 | .01637 | 20.75                  | 2.45 | 15.85 |
| 70-675ES  | .816            | .070 ±.003 | .676 ±.009 | .00902 | 20.75                  | 1.80 | 17.15 |
| 1-908     | .818            | .087 ±.003 | .644 ±.009 | .01365 | 20.80                  | 2.20 | 16.35 |
| 87-644    | .818            | .087 ±.003 | .644 ±.009 | .01365 | 20.80                  | 2.20 | 16.35 |
| 1-114     | .818            | .103 ±.003 | .612 ±.009 | .01872 | 20.80                  | 2.60 | 15.55 |
| 50-720    | .820            | .050 ±.003 | .720 ±.009 | .00475 | 20.85                  | 1.25 | 18.30 |
| 172-480   | .824            | .172 ±.005 | .480 ±.005 | .04759 | 20.95                  | 4.35 | 12.20 |
| 71-683    | .825            | .071 ±.003 | .683 ±.009 | .00938 | 20.95                  | 1.80 | 17.35 |
| 104-618   | .826            | .104 ±.003 | .618 ±.009 | .01927 | 21.00                  | 2.65 | 15.70 |
| 1-207     | .827            | .139 ±.004 | .549 ±.007 | .03280 | 21.00                  | 3.55 | 13.95 |
| 40-750    | .830            | .040 ±.003 | .750 ±.009 | .00312 | 21.10                  | 1.00 | 19.05 |
| 92-635SS  | .830            | .093 ±.003 | .644 ±.009 | .01573 | 21.10                  | 2.35 | 16.35 |
| 50-720SS  | .832            | .051 ±.003 | .730 ±.009 | .00501 | 21.15                  | 1.30 | 18.55 |
| 103-612SS | .832            | .105 ±.003 | .622 ±.009 | .01978 | 21.15                  | 2.65 | 15.80 |
| 1-309     | .832            | .210 ±.005 | .412 ±.005 | .06768 | 21.15                  | 5.35 | 10.45 |
| 79-669VS  | .833            | .080 ±.003 | .673 ±.009 | .01189 | 21.15                  | 2.05 | 17.10 |
| 140-555   | .835            | .140 ±.004 | .555 ±.007 | .03361 | 21.20                  | 3.55 | 14.10 |
| 93-634SS  | .838            | .095 ±.003 | .648 ±.009 | .01655 | 21.30                  | 2.40 | 16.45 |
| 31-779    | .841            | .031 ±.003 | .779 ±.009 | .00192 | 21.35                  | .80  | 19.80 |
| 94-656    | .844            | .094 ±.003 | .656 ±.007 | .01635 | 21.45                  | 2.40 | 16.65 |
| 70-706    | .846            | .070 ±.003 | .706 ±.009 | .00938 | 21.50                  | 1.80 | 17.95 |
| 70-688SS  | .847            | .072 ±.003 | .703 ±.009 | .00991 | 21.50                  | 1.85 | 17.85 |
| 86-675    | .847            | .086 ±.003 | .675 ±.009 | .01389 | 21.50                  | 2.20 | 17.15 |
| 103-643   | .849            | .103 ±.003 | .643 ±.009 | .01953 | 21.55                  | 2.60 | 16.35 |
| 139-576   | .854            | .139 ±.004 | .576 ±.007 | .03409 | 21.70                  | 3.55 | 14.65 |
| 87-681    | .855            | .087 ±.003 | .681 ±.009 | .01434 | 21.70                  | 2.20 | 17.30 |
| 70-720    | .860            | .070 ±.003 | .720 ±.009 | .00955 | 21.85                  | 1.80 | 18.30 |
| 75-710    | .860            | .075 ±.003 | .710 ±.009 | .01090 | 21.85                  | 1.90 | 18.05 |
| 83-676SS  | .860            | .085 ±.003 | .690 ±.009 | .01382 | 21.85                  | 2.15 | 17.55 |
| 168-524   | .860            | .168 ±.005 | .524 ±.005 | .04819 | 21.85                  | 4.25 | 13.30 |
| 70-724    | .864            | .070 ±.003 | .724 ±.009 | .00960 | 21.95                  | 1.80 | 18.40 |
| 40-785    | .865            | .040 ±.003 | .785 ±.009 | .00326 | 21.95                  | 1.00 | 19.95 |
| 30-810ES  | .872            | .030 ±.003 | .812 ±.009 | .00187 | 22.15                  | .75  | 20.60 |
| 62-750    | .874            | .062 ±.003 | .750 ±.009 | .00770 | 22.20                  | 1.55 | 19.05 |
| 125-625   | .875            | .125 ±.004 | .625 ±.009 | .02891 | 22.25                  | 3.20 | 15.90 |
| 1-018     | .879            | .070 ±.003 | .739 ±.009 | .00978 | 22.35                  | 1.80 | 18.75 |
| 87-705    | .879            | .087 ±.003 | .705 ±.009 | .01479 | 22.35                  | 2.20 | 17.90 |
| 1-115     | .880            | .103 ±.003 | .674 ±.009 | .02034 | 22.35                  | 2.60 | 17.10 |
| 73-735    | .881            | .073 ±.003 | .735 ±.009 | .01062 | 22.40                  | 1.85 | 18.65 |
| 70-742    | .882            | .070 ±.003 | .742 ±.009 | .00982 | 22.40                  | 1.80 | 18.85 |
| 45-787VS  | .884            | .045 ±.003 | .794 ±.009 | .00419 | 22.45                  | 1.15 | 20.15 |
| 47-780SS  | .884            | .048 ±.003 | .788 ±.009 | .00475 | 22.45                  | 1.20 | 20.00 |
| 91-702    | .884            | .091 ±.003 | .702 ±.009 | .01620 | 22.45                  | 2.30 | 17.85 |
| 1-208     | .887            | .139 ±.004 | .609 ±.009 | .03566 | 22.55                  | 3.55 | 15.45 |
| 106-665VS | .888            | .107 ±.004 | .674 ±.009 | .02206 | 22.55                  | 2.70 | 17.10 |



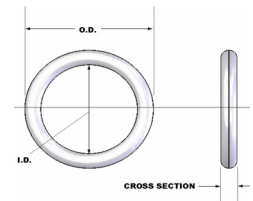
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 104-681   | .889            | .104 ±.003 | .681 ±.009 | .02095 | 22.60                  | 2.65 | 17.30 |
| 120-636SS | .889            | .122 ±.004 | .645 ±.009 | .02817 | 22.60                  | 3.10 | 16.40 |
| 70-739VS  | .890            | .071 ±.003 | .748 ±.009 | .01019 | 22.60                  | 1.80 | 19.00 |
| 1-310     | .895            | .210 ±.005 | .475 ±.005 | .07454 | 22.75                  | 5.35 | 12.05 |
| 49-782SS  | .897            | .050 ±.003 | .797 ±.009 | .00522 | 22.80                  | 1.25 | 20.25 |
| 30-840    | .900            | .030 ±.003 | .840 ±.009 | .00193 | 22.85                  | .75  | 21.35 |
| 40-820    | .900            | .040 ±.003 | .820 ±.009 | .00340 | 22.85                  | 1.00 | 20.85 |
| 1-909     | .900            | .097 ±.003 | .706 ±.009 | .01864 | 22.85                  | 2.45 | 17.95 |
| 113-674   | .900            | .113 ±.004 | .674 ±.009 | .02480 | 22.85                  | 2.85 | 17.10 |
| 70-739SS  | .904            | .072 ±.003 | .760 ±.009 | .01064 | 22.95                  | 1.85 | 19.30 |
| 40-825    | .905            | .040 ±.003 | .825 ±.009 | .00341 | 23.00                  | 1.00 | 20.95 |
| 103-700   | .906            | .103 ±.003 | .700 ±.009 | .02102 | 23.00                  | 2.60 | 17.80 |
| 70-769    | .909            | .070 ±.003 | .769 ±.009 | .01014 | 23.10                  | 1.80 | 19.55 |
| 285-340   | .910            | .285 ±.006 | .340 ±.005 | .12526 | 23.10                  | 7.25 | 8.65  |
| 82-750    | .914            | .082 ±.003 | .750 ±.009 | .01380 | 23.20                  | 2.10 | 19.05 |
| 158-605   | .921            | .158 ±.005 | .605 ±.009 | .04700 | 23.40                  | 4.00 | 15.35 |
| 32-860    | .924            | .032 ±.003 | .860 ±.009 | .00225 | 23.45                  | .80  | 21.85 |
| 139-640   | .926            | .140 ±.004 | .646 ±.009 | .03801 | 23.50                  | 3.55 | 16.40 |
| 80-758SS  | .931            | .081 ±.003 | .769 ±.009 | .01376 | 23.65                  | 2.05 | 19.55 |
| 87-760    | .934            | .087 ±.003 | .760 ±.009 | .01582 | 23.70                  | 2.20 | 19.30 |
| 63-799VS  | .935            | .064 ±.003 | .807 ±.009 | .00880 | 23.75                  | 1.65 | 20.50 |
| 171-595   | .937            | .171 ±.005 | .595 ±.007 | .05527 | 23.80                  | 4.35 | 15.10 |
| 63-813    | .939            | .063 ±.003 | .813 ±.009 | .00858 | 23.85                  | 1.60 | 20.65 |
| 45-850    | .940            | .045 ±.003 | .850 ±.009 | .00447 | 23.90                  | 1.15 | 21.60 |
| 103-734PL | .940            | .103 ±.003 | .734 ±.009 | .02191 | 23.90                  | 2.60 | 18.65 |
| 1-019     | .941            | .070 ±.003 | .801 ±.009 | .01053 | 23.90                  | 1.80 | 20.35 |
| 140-741   | .942            | .104 ±.004 | .734 ±.010 | .02236 | 23.95                  | 2.65 | 18.65 |
| 1-116     | .943            | .103 ±.003 | .737 ±.009 | .02199 | 23.95                  | 2.60 | 18.70 |
| 166-612   | .944            | .166 ±.005 | .612 ±.009 | .05290 | 24.00                  | 4.20 | 15.55 |
| 118-709   | .945            | .118 ±.004 | .709 ±.009 | .02841 | 24.00                  | 3.00 | 18.00 |
| 1-910     | .949            | .097 ±.003 | .755 ±.009 | .01978 | 24.10                  | 2.45 | 19.20 |
| 1-209     | .950            | .139 ±.004 | .672 ±.009 | .03866 | 24.15                  | 3.55 | 17.05 |
| 71-810    | .952            | .071 ±.003 | .810 ±.009 | .01096 | 24.20                  | 1.80 | 20.55 |
| 170-612   | .952            | .170 ±.005 | .612 ±.009 | .05576 | 24.20                  | 4.30 | 15.55 |
| 104-745   | .953            | .104 ±.003 | .745 ±.009 | .02266 | 24.20                  | 2.65 | 18.90 |
| 80-796    | .956            | .080 ±.003 | .796 ±.009 | .01383 | 24.30                  | 2.05 | 20.20 |
| 40-879    | .959            | .040 ±.003 | .879 ±.009 | .00363 | 24.35                  | 1.00 | 22.35 |
| 59-836SS  | .959            | .059 ±.003 | .841 ±.009 | .00773 | 24.35                  | 1.50 | 21.35 |
| 91-760SS  | .959            | .093 ±.003 | .773 ±.009 | .01848 | 24.35                  | 2.35 | 19.65 |
| 1-311     | .959            | .210 ±.005 | .537 ±.007 | .08150 | 24.35                  | 5.35 | 13.65 |
| 31-898    | .960            | .031 ±.003 | .898 ±.009 | .00220 | 24.40                  | .80  | 22.80 |
| 100-760   | .960            | .100 ±.003 | .760 ±.009 | .02122 | 24.40                  | 2.55 | 19.30 |
| 98-765    | .961            | .098 ±.003 | .765 ±.009 | .02045 | 24.40                  | 2.50 | 19.45 |
| 52-864    | .968            | .052 ±.003 | .864 ±.009 | .00611 | 24.60                  | 1.30 | 21.95 |
| 234-500   | .968            | .234 ±.006 | .500 ±.010 | .09917 | 24.60                  | 5.95 | 12.70 |



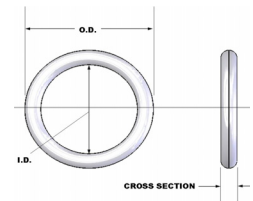
# Engineers Guide for O-Rings



| Mold IDen | Inch Dimensions |            |            |        | Metric Dimensions (mm) |      |       |
|-----------|-----------------|------------|------------|--------|------------------------|------|-------|
|           | OD              | C/S        | ID         | Volume | OD                     | C/S  | ID    |
| 250-469   | .969            | .250 ±.006 | .469 ±.010 | .11088 | 24.60                  | 6.35 | 11.90 |
| 118-728SS | .973            | .119 ±.004 | .735 ±.010 | .02984 | 24.70                  | 3.00 | 18.65 |
| 103-768   | .974            | .103 ±.003 | .768 ±.009 | .02280 | 24.75                  | 2.60 | 19.50 |
| 50-875    | .975            | .050 ±.003 | .875 ±.009 | .00571 | 24.75                  | 1.25 | 22.25 |
| 31-915    | .977            | .031 ±.003 | .915 ±.009 | .00224 | 24.80                  | .80  | 23.25 |
| 187-609   | .983            | .187 ±.005 | .609 ±.009 | .06868 | 24.95                  | 4.75 | 15.45 |
| 59-866    | .984            | .059 ±.003 | .866 ±.009 | .00794 | 25.00                  | 1.50 | 22.00 |
| 138-708   | .984            | .138 ±.004 | .708 ±.009 | .03975 | 25.00                  | 3.50 | 18.00 |
| 140-692SS | .985            | .142 ±.004 | .701 ±.009 | .04194 | 25.00                  | 3.60 | 17.80 |
| 98-787ES  | .985            | .098 ±.003 | .789 ±.009 | .02102 | 25.00                  | 2.50 | 20.05 |
| 243-500   | .986            | .243 ±.006 | .500 ±.010 | .10825 | 25.05                  | 6.15 | 12.70 |
| 87-817    | .991            | .087 ±.003 | .817 ±.010 | .01688 | 25.15                  | 2.20 | 20.75 |
| 24-945    | .993            | .024 ±.003 | .945 ±.009 | .00138 | 25.20                  | .60  | 24.00 |
| 118-748VS | .993            | .119 ±.004 | .755 ±.010 | .03054 | 25.20                  | 3.00 | 19.20 |
| 68-843SS  | .994            | .069 ±.003 | .856 ±.009 | .01087 | 25.25                  | 1.75 | 21.75 |
| 70-831SS  | .994            | .072 ±.003 | .850 ±.009 | .01179 | 25.25                  | 1.85 | 21.60 |
| 47-894SS  | .999            | .048 ±.003 | .903 ±.009 | .00541 | 25.35                  | 1.20 | 22.95 |
| 70-850VS  | 1.000           | .071 ±.003 | .858 ±.009 | .01156 | 25.40                  | 1.80 | 21.80 |
| 1-020     | 1.004           | .070 ±.003 | .864 ±.009 | .01129 | 25.50                  | 1.80 | 21.95 |
| 104-787VS | 1.004           | .105 ±.003 | .794 ±.009 | .02446 | 25.50                  | 2.65 | 20.15 |
| 1-117     | 1.005           | .103 ±.003 | .799 ±.010 | .02361 | 25.55                  | 2.60 | 20.30 |
| 159-688   | 1.006           | .159 ±.005 | .688 ±.009 | .05283 | 25.55                  | 4.05 | 17.50 |
| 185-625SS | 1.006           | .187 ±.005 | .632 ±.009 | .07067 | 25.55                  | 4.75 | 16.05 |
| 70-868    | 1.008           | .070 ±.003 | .868 ±.009 | .01134 | 25.60                  | 1.80 | 22.05 |
| 40-929    | 1.009           | .040 ±.003 | .929 ±.009 | .00383 | 25.65                  | 1.00 | 23.60 |
| 40-930    | 1.010           | .040 ±.003 | .930 ±.009 | .00383 | 25.65                  | 1.00 | 23.60 |
| 70-843SSS | 1.010           | .072 ±.003 | .866 ±.009 | .01200 | 25.65                  | 1.85 | 22.00 |
| 270-470   | 1.010           | .270 ±.006 | .470 ±.010 | .13311 | 25.65                  | 6.85 | 11.95 |
| 1-210     | 1.012           | .139 ±.004 | .734 ±.010 | .04162 | 25.70                  | 3.55 | 18.65 |
| 52-910    | 1.014           | .052 ±.003 | .910 ±.009 | .00642 | 25.75                  | 1.30 | 23.10 |
| 218-578   | 1.014           | .218 ±.006 | .578 ±.010 | .09334 | 25.75                  | 5.55 | 14.70 |
| 104-809   | 1.017           | .104 ±.003 | .809 ±.010 | .02437 | 25.85                  | 2.65 | 20.55 |
| 71-876    | 1.018           | .071 ±.003 | .876 ±.009 | .01178 | 25.85                  | 1.80 | 22.25 |
| 190-638   | 1.018           | .190 ±.005 | .638 ±.009 | .07375 | 25.85                  | 4.85 | 16.20 |
| 103-814   | 1.020           | .103 ±.003 | .814 ±.010 | .02400 | 25.90                  | 2.60 | 20.70 |
| 70-879ES  | 1.022           | .070 ±.003 | .882 ±.009 | .01151 | 25.95                  | 1.80 | 22.40 |
| 80-850SS  | 1.022           | .081 ±.003 | .860 ±.010 | .01523 | 25.95                  | 2.05 | 21.85 |
| 1-312     | 1.022           | .210 ±.005 | .600 ±.009 | .08836 | 25.95                  | 5.35 | 15.25 |
| 59-905    | 1.023           | .059 ±.003 | .905 ±.009 | .00828 | 26.00                  | 1.50 | 23.00 |
| 54-908SS  | 1.027           | .055 ±.003 | .917 ±.009 | .00725 | 26.10                  | 1.40 | 23.30 |
| 79-866ES  | 1.028           | .079 ±.003 | .870 ±.010 | .01461 | 26.10                  | 2.00 | 22.10 |
| 35-950SS  | 1.029           | .035 ±.003 | .959 ±.009 | .00300 | 26.15                  | .90  | 24.35 |
| 40-950    | 1.030           | .040 ±.003 | .950 ±.009 | .00391 | 26.15                  | 1.00 | 24.15 |
| 118-787VS | 1.032           | .119 ±.004 | .794 ±.010 | .03190 | 26.20                  | 3.00 | 20.15 |
| 35-964ES  | 1.037           | .035 ±.003 | .967 ±.009 | .00303 | 26.35                  | .90  | 24.55 |



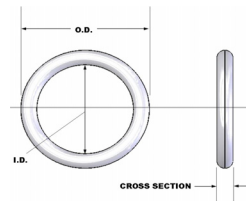
# Engineers Guide for O-Rings



| Mold IDen  | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|            | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 70-879SS   | 1.038           | .071 ±.003 | .896 ±.009  | .01203 | 26.35                  | 1.80 | 22.75 |
| 157-715VS  | 1.040           | .159 ±.005 | .722 ±.009  | .05496 | 26.40                  | 4.05 | 18.35 |
| 139-765    | 1.043           | .139 ±.004 | .765 ±.010  | .04310 | 26.50                  | 3.55 | 19.45 |
| 158-730    | 1.046           | .158 ±.005 | .730 ±.009  | .05470 | 26.55                  | 4.00 | 18.55 |
| 118-795SS  | 1.050           | .120 ±.004 | .810 ±.010  | .03304 | 26.65                  | 3.05 | 20.55 |
| 104-835VS  | 1.053           | .105 ±.003 | .843 ±.010  | .02579 | 26.75                  | 2.65 | 21.40 |
| 30-980SS   | 1.054           | .030 ±.003 | .994 ±.010  | .00227 | 26.75                  | .75  | 25.25 |
| 103-850    | 1.054           | .103 ±.003 | .848 ±.010  | .02489 | 26.75                  | 2.60 | 21.55 |
| 80-880SS   | 1.055           | .081 ±.003 | .893 ±.010  | .01577 | 26.80                  | 2.05 | 22.70 |
| 90-854SS   | 1.056           | .092 ±.003 | .872 ±.010  | .02013 | 26.80                  | 2.35 | 22.15 |
| 32-995     | 1.059           | .032 ±.003 | .995 ±.010  | .00259 | 26.90                  | .80  | 25.25 |
| 1-021      | 1.066           | .070 ±.003 | .926 ±.009  | .01204 | 27.10                  | 1.80 | 23.50 |
| 46-967VS   | 1.068           | .046 ±.003 | .976 ±.009  | .00534 | 27.15                  | 1.15 | 24.80 |
| 1-118      | 1.068           | .103 ±.003 | .862 ±.010  | .02526 | 27.15                  | 2.60 | 21.90 |
| 72-926     | 1.070           | .072 ±.003 | .926 ±.009  | .01277 | 27.20                  | 1.85 | 23.50 |
| 83-906     | 1.072           | .083 ±.003 | .906 ±.010  | .01681 | 27.25                  | 2.10 | 23.00 |
| 59-945SS   | 1.074           | .060 ±.003 | .954 ±.009  | .00901 | 27.30                  | 1.50 | 24.25 |
| 1-211      | 1.074           | .139 ±.004 | .796 ±.010  | .04457 | 27.30                  | 3.55 | 20.20 |
| 55-690VS   | 1.075           | .055 ±.003 | .965 ±.009  | .00761 | 27.30                  | 1.40 | 24.50 |
| 71-935     | 1.077           | .071 ±.003 | .935 ±.009  | .01251 | 27.35                  | 1.80 | 23.75 |
| 125-827    | 1.077           | .125 ±.004 | .827 ±.010  | .03670 | 27.35                  | 3.20 | 21.00 |
| 104-870    | 1.078           | .104 ±.003 | .870 ±.010  | .02599 | 27.40                  | 2.65 | 22.10 |
| 30-1.010VS | 1.079           | .030 ±.003 | 1.019 ±.010 | .00233 | 27.40                  | .75  | 25.90 |
| 45-990     | 1.080           | .045 ±.003 | .990 ±.010  | .00517 | 27.45                  | 1.15 | 25.15 |
| 70-943     | 1.083           | .070 ±.003 | .943 ±.009  | .01225 | 27.50                  | 1.80 | 23.95 |
| 50-984     | 1.084           | .050 ±.003 | .984 ±.009  | .00638 | 27.55                  | 1.25 | 25.00 |
| 1-313      | 1.084           | .210 ±.005 | .662 ±.009  | .09510 | 27.55                  | 5.35 | 16.80 |
| 81-925     | 1.087           | .081 ±.003 | .925 ±.010  | .01629 | 27.60                  | 2.05 | 23.50 |
| 63-962     | 1.088           | .063 ±.003 | .962 ±.009  | .01004 | 27.65                  | 1.60 | 24.45 |
| 39-1.010ES | 1.093           | .039 ±.003 | 1.015 ±.010 | .00396 | 27.75                  | 1.00 | 25.80 |
| 1-911      | 1.095           | .116 ±.004 | .863 ±.010  | .03250 | 27.80                  | 2.95 | 21.90 |
| 155-790    | 1.100           | .155 ±.005 | .790 ±.010  | .05602 | 27.95                  | 3.95 | 20.05 |
| 32-1.039   | 1.103           | .032 ±.003 | 1.039 ±.010 | .00271 | 28.00                  | .80  | 26.40 |
| 79-945     | 1.103           | .079 ±.003 | .945 ±.010  | .01577 | 28.00                  | 2.00 | 24.00 |
| 58-989     | 1.105           | .058 ±.003 | .989 ±.010  | .00869 | 28.05                  | 1.45 | 25.10 |
| 63-970ES   | 1.107           | .064 ±.003 | .979 ±.009  | .01054 | 28.10                  | 1.65 | 24.85 |
| 55-1.000   | 1.110           | .055 ±.003 | 1.000 ±.010 | .00787 | 28.20                  | 1.40 | 25.40 |
| 118-866SS  | 1.111           | .119 ±.004 | .873 ±.010  | .03466 | 28.20                  | 3.00 | 22.15 |
| 88-910SS   | 1.111           | .090 ±.003 | .931 ±.010  | .02041 | 28.20                  | 2.30 | 23.65 |
| 32-1.050   | 1.114           | .032 ±.003 | 1.050 ±.010 | .00273 | 28.30                  | .80  | 26.65 |
| 40-1.040   | 1.120           | .040 ±.003 | 1.040 ±.010 | .00426 | 28.45                  | 1.00 | 26.40 |
| 178-767    | 1.123           | .178 ±.005 | .767 ±.010  | .07388 | 28.50                  | 4.50 | 19.50 |
| 150-825    | 1.125           | .150 ±.005 | .825 ±.010  | .05413 | 28.60                  | 3.80 | 20.95 |
| 1-022      | 1.129           | .070 ±.003 | .989 ±.010  | .01280 | 28.70                  | 1.80 | 25.10 |
| 135-859    | 1.129           | .135 ±.004 | .859 ±.010  | .04470 | 28.70                  | 3.45 | 21.80 |



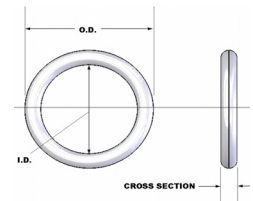
# Engineers Guide for O-Rings



| Mold IDen  | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|            | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 59-1.012   | 1.130           | .059 ±.003 | 1.012 ±.010 | .00920 | 28.70                  | 1.50 | 25.70 |
| 1-119      | 1.130           | .103 ±.003 | .924 ±.010  | .02688 | 28.70                  | 2.60 | 23.45 |
| 47-1.024SS | 1.130           | .048 ±.003 | 1.034 ±.010 | .00615 | 28.70                  | 1.20 | 26.25 |
| 156-800SS  | 1.131           | .159 ±.005 | .813 ±.010  | .06063 | 28.75                  | 4.05 | 20.65 |
| 26-1.080   | 1.132           | .026 ±.003 | 1.080 ±.010 | .00184 | 28.75                  | .65  | 27.45 |
| 31-1.071   | 1.133           | .031 ±.003 | 1.071 ±.010 | .00261 | 28.80                  | .80  | 27.20 |
| 70-985SS   | 1.134           | .071 ±.003 | .992 ±.010  | .01322 | 28.80                  | 1.80 | 25.20 |
| 1-212      | 1.137           | .139 ±.004 | .859 ±.010  | .04758 | 28.90                  | 3.55 | 21.80 |
| 71-998     | 1.140           | .071 ±.003 | .998 ±.010  | .01330 | 28.95                  | 1.80 | 25.35 |
| 104-933    | 1.141           | .104 ±.003 | .933 ±.010  | .02767 | 29.00                  | 2.65 | 23.70 |
| 40-1.062   | 1.142           | .040 ±.003 | 1.062 ±.010 | .00435 | 29.00                  | 1.00 | 26.95 |
| 79-984     | 1.142           | .079 ±.003 | .984 ±.010  | .01637 | 29.00                  | 2.00 | 25.00 |
| 249-635SS  | 1.142           | .251 ±.005 | .640 ±.008  | .13850 | 29.00                  | 6.40 | 16.25 |
| 103-940    | 1.146           | .103 ±.003 | .940 ±.010  | .02730 | 29.10                  | 2.60 | 23.90 |
| 39-1.063VS | 1.147           | .039 ±.003 | 1.069 ±.010 | .00416 | 29.15                  | 1.00 | 27.15 |
| 1-314      | 1.147           | .210 ±.005 | .725 ±.010  | .10196 | 29.15                  | 5.35 | 18.40 |
| 125-900    | 1.150           | .125 ±.004 | .900 ±.010  | .03952 | 29.20                  | 3.20 | 22.85 |
| 37-1.080   | 1.156           | .037 ±.003 | 1.082 ±.010 | .00378 | 29.35                  | .95  | 27.50 |
| 1-912      | 1.156           | .116 ±.004 | .924 ±.010  | .03453 | 29.35                  | 2.95 | 23.45 |
| 156-844    | 1.156           | .156 ±.005 | .844 ±.010  | .06005 | 29.35                  | 3.95 | 21.45 |
| 156-837ES  | 1.156           | .157 ±.003 | .842 ±.010  | .06076 | 29.35                  | 4.00 | 21.40 |
| 70-1.015ES | 1.157           | .070 ±.003 | 1.017 ±.010 | .01314 | 29.40                  | 1.80 | 25.85 |
| 114-929    | 1.157           | .114 ±.004 | .929 ±.010  | .03345 | 29.40                  | 2.90 | 23.60 |
| 176-787SS  | 1.157           | .179 ±.005 | .799 ±.010  | .07732 | 29.40                  | 4.55 | 20.30 |
| 150-850VS  | 1.158           | .151 ±.005 | .856 ±.010  | .05665 | 29.40                  | 3.85 | 21.75 |
| 25-1.110   | 1.160           | .025 ±.003 | 1.110 ±.010 | .00175 | 29.45                  | .65  | 28.20 |
| 65-1.030   | 1.160           | .065 ±.003 | 1.030 ±.010 | .01142 | 29.45                  | 1.65 | 26.15 |
| 360-440    | 1.160           | .360 ±.007 | .440 ±.005  | .25582 | 29.45                  | 9.15 | 11.20 |
| 32-1.100   | 1.164           | .032 ±.003 | 1.100 ±.010 | .00286 | 29.55                  | .80  | 27.95 |
| 25-1.115   | 1.165           | .025 ±.003 | 1.115 ±.010 | .00176 | 29.60                  | .65  | 28.30 |
| 40-1.086   | 1.166           | .040 ±.003 | 1.086 ±.010 | .00445 | 29.60                  | 1.00 | 27.60 |
| 80-1.000SS | 1.170           | .080 ±.003 | 1.010 ±.010 | .01721 | 29.70                  | 2.05 | 25.65 |
| 123-924    | 1.170           | .123 ±.004 | .924 ±.010  | .03908 | 29.70                  | 3.10 | 23.45 |
| 60-1.051   | 1.171           | .060 ±.003 | 1.051 ±.010 | .00987 | 29.75                  | 1.50 | 26.70 |
| 158-855SS  | 1.176           | .159 ±.005 | .858 ±.010  | .06344 | 29.85                  | 4.05 | 21.80 |
| 100-984    | 1.184           | .100 ±.003 | .984 ±.010  | .02675 | 30.05                  | 2.55 | 25.00 |
| 40-1.105   | 1.185           | .040 ±.003 | 1.105 ±.010 | .00452 | 30.10                  | 1.00 | 28.05 |
| 150-886    | 1.186           | .150 ±.005 | .886 ±.010  | .05752 | 30.10                  | 3.80 | 22.50 |
| 43-1.101   | 1.187           | .043 ±.003 | 1.101 ±.010 | .00522 | 30.15                  | 1.10 | 27.95 |
| 141-905    | 1.187           | .141 ±.004 | .905 ±.010  | .05131 | 30.15                  | 3.60 | 23.00 |
| 63-1.063   | 1.189           | .063 ±.003 | 1.063 ±.010 | .01103 | 30.20                  | 1.60 | 27.00 |
| 118-953    | 1.189           | .118 ±.004 | .953 ±.010  | .03680 | 30.20                  | 3.00 | 24.20 |
| 1-023      | 1.191           | .070 ±.003 | 1.051 ±.010 | .01355 | 30.25                  | 1.80 | 26.70 |
| 36-1.118   | 1.192           | .036 ±.003 | 1.120 ±.010 | .00370 | 30.30                  | .90  | 28.45 |
| 62-1.069   | 1.193           | .062 ±.003 | 1.069 ±.010 | .01073 | 30.30                  | 1.55 | 27.15 |



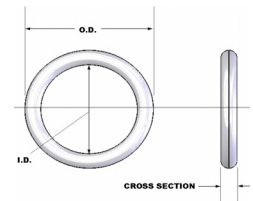
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 1-120       | 1.193           | .103 ±.003 | .987 ±.010  | .02853 | 30.30                  | 2.60 | 25.05 |
| 43-1.101SS  | 1.196           | .043 ±.003 | 1.110 ±.010 | .00526 | 30.40                  | 1.10 | 28.20 |
| 1-213       | 1.199           | .139 ±.004 | .921 ±.010  | .05053 | 30.45                  | 3.55 | 23.40 |
| 71-1.061    | 1.203           | .071 ±.003 | 1.061 ±.010 | .01408 | 30.55                  | 1.80 | 26.95 |
| 40-1.116VS  | 1.206           | .040 ±.003 | 1.126 ±.010 | .00460 | 30.65                  | 1.00 | 28.60 |
| 156-875SS   | 1.207           | .159 ±.005 | .889 ±.010  | .06537 | 30.65                  | 4.05 | 22.60 |
| 71-1.046SS  | 1.209           | .072 ±.003 | 1.065 ±.010 | .01454 | 30.70                  | 1.85 | 27.05 |
| 1-315       | 1.209           | .210 ±.005 | .787 ±.010  | .10870 | 30.70                  | 5.35 | 20.00 |
| 185-840     | 1.210           | .185 ±.005 | .840 ±.010  | .08656 | 30.75                  | 4.70 | 21.35 |
| 125-950SS   | 1.212           | .126 ±.004 | .960 ±.010  | .04254 | 30.80                  | 3.20 | 24.40 |
| 1-913       | 1.218           | .116 ±.004 | .986 ±.010  | .03659 | 30.95                  | 2.95 | 25.05 |
| 210-799     | 1.219           | .210 ±.005 | .799 ±.010  | .10979 | 30.95                  | 5.35 | 20.30 |
| 141-938     | 1.220           | .141 ±.004 | .938 ±.010  | .05293 | 31.00                  | 3.60 | 23.85 |
| 79-1.063    | 1.221           | .079 ±.003 | 1.063 ±.010 | .01759 | 31.00                  | 2.00 | 27.00 |
| 103.1.008ES | 1.222           | .104 ±.003 | 1.014 ±.010 | .02984 | 31.05                  | 2.65 | 25.75 |
| 72-1.081    | 1.225           | .072 ±.003 | 1.081 ±.010 | .01475 | 31.10                  | 1.85 | 27.45 |
| 93-1.040    | 1.226           | .093 ±.003 | 1.040 ±.010 | .02418 | 31.15                  | 2.35 | 26.40 |
| 49-1.130    | 1.228           | .049 ±.003 | 1.130 ±.010 | .00698 | 31.20                  | 1.25 | 28.70 |
| 139-953     | 1.231           | .139 ±.004 | .953 ±.010  | .05206 | 31.25                  | 3.55 | 24.20 |
| 28-1.181    | 1.237           | .028 ±.003 | 1.181 ±.011 | .00234 | 31.40                  | .70  | 30.00 |
| 275-687     | 1.237           | .275 ±.006 | .687 ±.010  | .17951 | 31.40                  | 7.00 | 17.45 |
| 70-1.082SS  | 1.242           | .071 ±.003 | 1.100 ±.010 | .01457 | 31.55                  | 1.80 | 27.95 |
| 45-1.153    | 1.243           | .045 ±.003 | 1.153 ±.010 | .00599 | 31.55                  | 1.15 | 29.30 |
| 46-1.130SS  | 1.243           | .047 ±.003 | 1.149 ±.010 | .00652 | 31.55                  | 1.20 | 29.20 |
| 30-1.190    | 1.250           | .030 ±.003 | 1.190 ±.011 | .00271 | 31.75                  | .75  | 30.25 |
| 250-750     | 1.250           | .250 ±.006 | .750 ±.010  | .15421 | 31.75                  | 6.35 | 19.05 |
| 93-1.065    | 1.251           | .093 ±.003 | 1.065 ±.010 | .02471 | 31.80                  | 2.35 | 27.05 |
| 1-024       | 1.254           | .070 ±.003 | 1.114 ±.010 | .01431 | 31.85                  | 1.80 | 28.30 |
| 1-121       | 1.255           | .103 ±.003 | 1.049 ±.010 | .03016 | 31.90                  | 2.60 | 26.65 |
| 78-1.102    | 1.258           | .078 ±.003 | 1.102 ±.010 | .01771 | 31.95                  | 2.00 | 28.00 |
| 98-1.063    | 1.259           | .098 ±.003 | 1.063 ±.010 | .02751 | 32.00                  | 2.50 | 27.00 |
| 56-1.148    | 1.260           | .056 ±.003 | 1.148 ±.010 | .00932 | 32.00                  | 1.40 | 29.15 |
| 54-1.153    | 1.261           | .054 ±.003 | 1.153 ±.010 | .00868 | 32.05                  | 1.35 | 29.30 |
| 1-214       | 1.262           | .139 ±.004 | .984 ±.010  | .05354 | 32.05                  | 3.55 | 25.00 |
| 223-813SS   | 1.263           | .224 ±.006 | .815 ±.010  | .12863 | 32.10                  | 5.70 | 20.70 |
| 197-866     | 1.265           | .198 ±.005 | .869 ±.010  | .10321 | 32.15                  | 5.05 | 22.05 |
| 39-1.189    | 1.267           | .039 ±.003 | 1.189 ±.011 | .00461 | 32.20                  | 1.00 | 30.20 |
| 90-1.091SS  | 1.267           | .090 ±.003 | 1.087 ±.010 | .02352 | 32.20                  | 2.30 | 27.60 |
| 104-1.059   | 1.267           | .104 ±.003 | 1.059 ±.010 | .03104 | 32.20                  | 2.65 | 26.90 |
| 140-988     | 1.268           | .140 ±.004 | .988 ±.010  | .05455 | 32.20                  | 3.55 | 25.10 |
| 156-938SS   | 1.269           | .158 ±.005 | .953 ±.010  | .06843 | 32.25                  | 4.00 | 24.20 |
| 1-316       | 1.270           | .210 ±.005 | .850 ±.010  | .11534 | 32.25                  | 5.35 | 21.60 |
| 345-580     | 1.270           | .345 ±.007 | .580 ±.007  | .27166 | 32.25                  | 8.75 | 14.75 |
| 70-1.114SS  | 1.272           | .071 ±.003 | 1.130 ±.010 | .01494 | 32.30                  | 1.80 | 28.70 |
| 190-870SS   | 1.275           | .194 ±.005 | .887 ±.010  | .10039 | 32.40                  | 4.95 | 22.55 |



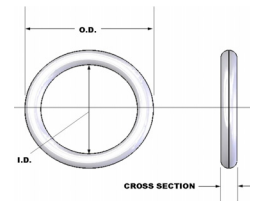
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 81-1.114    | 1.276           | .081 ±.003 | 1.114 ±.010 | .01935 | 32.40                  | 2.05 | 28.30 |
| 1-914       | 1.279           | .116 ±.004 | 1.047 ±.010 | .03861 | 32.50                  | 2.95 | 26.60 |
| 203-875     | 1.281           | .203 ±.005 | .875 ±.010  | .10961 | 32.55                  | 5.15 | 22.25 |
| 70-1.135ES  | 1.281           | .070 ±.003 | 1.141 ±.010 | .01464 | 32.55                  | 1.80 | 29.00 |
| 141-1.005   | 1.287           | .141 ±.004 | 1.005 ±.010 | .05622 | 32.70                  | 3.60 | 25.55 |
| 31-1.226    | 1.288           | .031 ±.003 | 1.226 ±.011 | .00298 | 32.70                  | .80  | 31.15 |
| 65-1.140SS  | 1.291           | .066 ±.003 | 1.159 ±.010 | .01317 | 32.80                  | 1.70 | 29.45 |
| 60-1.173    | 1.293           | .060 ±.003 | 1.173 ±.010 | .01095 | 32.85                  | 1.50 | 29.80 |
| 31-1.226ES  | 1.294           | .031 ±.003 | 1.232 ±.010 | .00299 | 32.85                  | .80  | 31.30 |
| 40-1.220    | 1.300           | .040 ±.003 | 1.220 ±.011 | .00497 | 33.00                  | 1.00 | 31.00 |
| 52-1.176SS  | 1.300           | .053 ±.003 | 1.194 ±.011 | .00864 | 33.00                  | 1.35 | 30.35 |
| 62-1.176    | 1.300           | .062 ±.003 | 1.176 ±.011 | .01174 | 33.00                  | 1.55 | 29.85 |
| 69-1.157VS  | 1.308           | .070 ±.003 | 1.168 ±.010 | .01497 | 33.20                  | 1.80 | 29.65 |
| 47-1.201SS  | 1.309           | .048 ±.003 | 1.213 ±.011 | .00717 | 33.25                  | 1.20 | 30.80 |
| 281-750     | 1.312           | .281 ±.006 | .750 ±.010  | .20087 | 33.30                  | 7.15 | 19.05 |
| 1-025       | 1.316           | .070 ±.003 | 1.176 ±.011 | .01506 | 33.45                  | 1.80 | 29.85 |
| 1-122       | 1.318           | .103 ±.003 | 1.112 ±.010 | .03180 | 33.50                  | 2.60 | 28.25 |
| 1-215       | 1.324           | .139 ±.004 | 1.046 ±.010 | .05649 | 33.65                  | 3.55 | 26.55 |
| 60-1.214NS  | 1.325           | .060 ±.003 | 1.205 ±.011 | .01124 | 33.65                  | 1.50 | 30.60 |
| 176-975     | 1.327           | .176 ±.005 | .975 ±.010  | .08797 | 33.70                  | 4.45 | 24.75 |
| 195-938     | 1.328           | .195 ±.005 | .938 ±.010  | .10630 | 33.75                  | 4.95 | 23.85 |
| 71-1.188    | 1.330           | .071 ±.003 | 1.188 ±.011 | .01566 | 33.80                  | 1.80 | 30.20 |
| 60-1.203ES  | 1.332           | .060 ±.003 | 1.212 ±.011 | .01130 | 33.85                  | 1.50 | 30.80 |
| 30-1.272    | 1.332           | .030 ±.003 | 1.272 ±.011 | .00289 | 33.85                  | .75  | 32.30 |
| 104-1.125   | 1.333           | .104 ±.003 | 1.125 ±.010 | .03280 | 33.85                  | 2.65 | 28.60 |
| 60-1.190SS  | 1.334           | .060 ±.003 | 1.214 ±.011 | .01132 | 33.90                  | 1.50 | 30.85 |
| 156-1.000SS | 1.334           | .159 ±.005 | 1.016 ±.010 | .07329 | 33.90                  | 4.05 | 25.80 |
| 1-317       | 1.334           | .210 ±.005 | .912 ±.010  | .12231 | 33.90                  | 5.35 | 23.15 |
| 76-1.188    | 1.340           | .076 ±.003 | 1.188 ±.012 | .01801 | 34.05                  | 1.95 | 30.20 |
| 40-1.249VS  | 1.341           | .040 ±.003 | 1.261 ±.011 | .00514 | 34.05                  | 1.00 | 32.05 |
| 1-915       | 1.341           | .116 ±.004 | 1.109 ±.012 | .04067 | 34.05                  | 2.95 | 28.15 |
| 52-1.245    | 1.349           | .052 ±.003 | 1.245 ±.011 | .00865 | 34.25                  | 1.30 | 31.60 |
| 50-1.250    | 1.350           | .050 ±.003 | 1.250 ±.011 | .00802 | 34.30                  | 1.25 | 31.75 |
| 54-1.228SS  | 1.350           | .055 ±.003 | 1.240 ±.011 | .00967 | 34.30                  | 1.40 | 31.50 |
| 47-1.245SS  | 1.351           | .047 ±.003 | 1.257 ±.011 | .00711 | 34.30                  | 1.20 | 31.95 |
| 70-1.220ES  | 1.362           | .070 ±.003 | 1.222 ±.011 | .01562 | 34.60                  | 1.80 | 31.05 |
| 53-1.257    | 1.363           | .053 ±.003 | 1.257 ±.011 | .00908 | 34.60                  | 1.35 | 31.95 |
| 118-1.121ES | 1.367           | .119 ±.004 | 1.129 ±.012 | .04361 | 34.70                  | 3.00 | 28.70 |
| 39-1.290    | 1.368           | .039 ±.003 | 1.290 ±.011 | .00499 | 34.75                  | 1.00 | 32.75 |
| 174-1.020   | 1.368           | .174 ±.005 | 1.020 ±.010 | .08920 | 34.75                  | 4.40 | 25.90 |
| 94-1.188    | 1.376           | .094 ±.003 | 1.188 ±.012 | .02795 | 34.95                  | 2.40 | 30.20 |
| 1-026       | 1.379           | .070 ±.003 | 1.239 ±.011 | .01583 | 35.05                  | 1.80 | 31.45 |
| 1-123       | 1.380           | .103 ±.003 | 1.174 ±.012 | .03343 | 35.05                  | 2.60 | 29.80 |
| 215-950     | 1.380           | .215 ±.005 | .950 ±.010  | .13287 | 35.05                  | 5.45 | 24.15 |
| 197-984VS   | 1.384           | .198 ±.005 | .988 ±.010  | .11472 | 35.15                  | 5.05 | 25.10 |



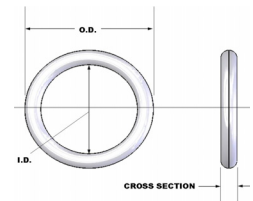
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|--------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S   | ID    |
| 1-216       | 1.387           | .139 ±.004 | 1.109 ±.012 | .05950 | 35.25                  | 3.55  | 28.15 |
| 40-1.310    | 1.390           | .040 ±.003 | 1.310 ±.011 | .00533 | 35.30                  | 1.00  | 33.25 |
| 78-1.234    | 1.390           | .078 ±.003 | 1.234 ±.012 | .01970 | 35.30                  | 2.00  | 31.35 |
| 71-1.251    | 1.393           | .071 ±.003 | 1.251 ±.011 | .01644 | 35.40                  | 1.80  | 31.80 |
| 31-1.331    | 1.393           | .031 ±.003 | 1.331 ±.011 | .00323 | 35.40                  | .80   | 33.80 |
| 114-1.165   | 1.393           | .114 ±.004 | 1.165 ±.012 | .04101 | 35.40                  | 2.90  | 29.60 |
| 60-1.274    | 1.394           | .060 ±.003 | 1.274 ±.011 | .01185 | 35.40                  | 1.50  | 32.35 |
| 1-318       | 1.395           | .210 ±.005 | .975 ±.010  | .12894 | 35.45                  | 5.35  | 24.75 |
| 70-1.240VS  | 1.397           | .071 ±.003 | 1.255 ±.011 | .01649 | 35.50                  | 1.80  | 31.90 |
| 65-1.262ES  | 1.398           | .065 ±.003 | 1.268 ±.011 | .01390 | 35.50                  | 1.65  | 32.20 |
| 140-1.119   | 1.399           | .140 ±.004 | 1.119 ±.012 | .06089 | 35.55                  | 3.55  | 28.40 |
| 55-1.290    | 1.400           | .055 ±.003 | 1.290 ±.011 | .01004 | 35.55                  | 1.40  | 32.75 |
| 1-916       | 1.403           | .116 ±.004 | 1.171 ±.012 | .04273 | 35.65                  | 2.95  | 29.75 |
| 275-859     | 1.409           | .275 ±.006 | .859 ±.010  | .21160 | 35.80                  | 7.00  | 21.80 |
| 415-580     | 1.410           | .415 ±.009 | .580 ±.007  | .42282 | 35.80                  | 10.55 | 14.75 |
| 70-1.240SS  | 1.411           | .072 ±.003 | 1.267 ±.011 | .01713 | 35.85                  | 1.85  | 32.20 |
| 145-1.109VS | 1.411           | .146 ±.005 | 1.119 ±.012 | .06653 | 35.85                  | 3.70  | 28.40 |
| 157-1.102   | 1.416           | .157 ±.005 | 1.102 ±.012 | .07657 | 35.95                  | 4.00  | 28.00 |
| 40-1.310SS  | 1.417           | .041 ±.003 | 1.335 ±.011 | .00571 | 36.00                  | 1.05  | 33.90 |
| 39-1.340    | 1.418           | .039 ±.003 | 1.340 ±.011 | .00518 | 36.00                  | 1.00  | 34.05 |
| 125-1.160ES | 1.420           | .126 ±.004 | 1.168 ±.012 | .05069 | 36.05                  | 3.20  | 29.65 |
| 60-1.304    | 1.424           | .060 ±.003 | 1.304 ±.011 | .01212 | 36.15                  | 1.50  | 33.10 |
| 50-1.325    | 1.425           | .050 ±.003 | 1.325 ±.011 | .00848 | 36.20                  | 1.25  | 33.65 |
| 158-1.105SS | 1.427           | .159 ±.005 | 1.109 ±.012 | .07910 | 36.25                  | 4.05  | 28.15 |
| 176-1.077   | 1.429           | .176 ±.005 | 1.077 ±.010 | .09577 | 36.30                  | 4.45  | 27.35 |
| 45-1.340    | 1.430           | .045 ±.003 | 1.340 ±.011 | .00692 | 36.30                  | 1.15  | 34.05 |
| 104-1.222   | 1.430           | .104 ±.003 | 1.222 ±.012 | .03539 | 36.30                  | 2.65  | 31.05 |
| 71-1.280VS  | 1.437           | .072 ±.003 | 1.293 ±.011 | .01746 | 36.50                  | 1.85  | 32.85 |
| 30-1.377ES  | 1.439           | .030 ±.003 | 1.379 ±.013 | .00313 | 36.55                  | .75   | 35.05 |
| 167-1.105   | 1.439           | .167 ±.005 | 1.105 ±.012 | .08753 | 36.55                  | 4.25  | 28.05 |
| 151-1.138   | 1.440           | .151 ±.005 | 1.138 ±.012 | .07252 | 36.60                  | 3.85  | 28.90 |
| 1-027       | 1.441           | .070 ±.003 | 1.301 ±.011 | .01658 | 36.60                  | 1.80  | 33.05 |
| 70-1.281SS  | 1.443           | .071 ±.003 | 1.301 ±.011 | .01707 | 36.65                  | 1.80  | 33.05 |
| 92-1.259    | 1.443           | .092 ±.003 | 1.259 ±.012 | .02821 | 36.65                  | 2.35  | 32.00 |
| 1-124       | 1.443           | .103 ±.003 | 1.237 ±.012 | .03508 | 36.65                  | 2.60  | 31.40 |
| 149-1.136SS | 1.445           | .149 ±.005 | 1.147 ±.012 | .07099 | 36.70                  | 3.80  | 29.15 |
| 235-975     | 1.445           | .235 ±.006 | .975 ±.010  | .16488 | 36.70                  | 5.95  | 24.75 |
| 1-217       | 1.449           | .139 ±.004 | 1.171 ±.012 | .06245 | 36.80                  | 3.55  | 29.75 |
| 176-1.100   | 1.452           | .176 ±.005 | 1.100 ±.012 | .09752 | 36.90                  | 4.45  | 27.95 |
| 40-1.350SS  | 1.453           | .041 ±.003 | 1.371 ±.013 | .00586 | 36.90                  | 1.05  | 34.80 |
| 71-1.314    | 1.456           | .071 ±.003 | 1.314 ±.011 | .01723 | 37.00                  | 1.80  | 33.40 |
| 140-1.176   | 1.456           | .140 ±.004 | 1.176 ±.012 | .06364 | 37.00                  | 3.55  | 29.85 |
| 104-1.249   | 1.457           | .104 ±.003 | 1.249 ±.012 | .03611 | 37.00                  | 2.65  | 31.70 |
| 1-319       | 1.457           | .210 ±.005 | 1.037 ±.010 | .13569 | 37.00                  | 5.35  | 26.35 |
| 187-1.088   | 1.462           | .187 ±.005 | 1.088 ±.010 | .11001 | 37.15                  | 4.75  | 27.65 |



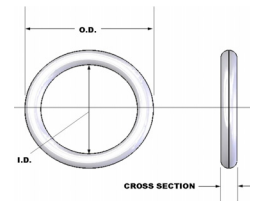
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|--------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S   | ID    |
| 48-1.375    | 1.471           | .048 ±.003 | 1.375 ±.013 | .00809 | 37.35                  | 1.20  | 34.95 |
| 149-1.180   | 1.478           | .149 ±.005 | 1.180 ±.012 | .07280 | 37.55                  | 3.80  | 29.95 |
| 250-980     | 1.480           | .250 ±.006 | .980 ±.010  | .18968 | 37.60                  | 6.35  | 24.90 |
| 213-1.057   | 1.483           | .213 ±.005 | 1.057 ±.010 | .14217 | 37.65                  | 5.40  | 26.85 |
| 45-1.395    | 1.485           | .045 ±.003 | 1.395 ±.013 | .00719 | 37.70                  | 1.15  | 35.45 |
| 395-677SS   | 1.485           | .400 ±.009 | .685 ±.010  | .42834 | 37.70                  | 10.15 | 17.40 |
| 212-1.060VS | 1.491           | .213 ±.005 | 1.065 ±.010 | .14306 | 37.85                  | 5.40  | 27.05 |
| 275-945     | 1.495           | .275 ±.006 | .945 ±.010  | .22765 | 37.95                  | 7.00  | 24.00 |
| 312-875     | 1.499           | .312 ±.006 | .875 ±.010  | .28510 | 38.05                  | 7.90  | 22.25 |
| 1-028       | 1.504           | .070 ±.003 | 1.364 ±.013 | .01734 | 38.20                  | 1.80  | 34.65 |
| 1-125       | 1.505           | .103 ±.003 | 1.299 ±.012 | .03670 | 38.25                  | 2.60  | 33.00 |
| 157-1.181   | 1.507           | .158 ±.005 | 1.191 ±.012 | .08309 | 38.30                  | 4.00  | 30.25 |
| 141-1.226   | 1.508           | .141 ±.004 | 1.226 ±.012 | .06706 | 38.30                  | 3.60  | 31.15 |
| 176-1.156   | 1.508           | .176 ±.005 | 1.156 ±.012 | .10181 | 38.30                  | 4.45  | 29.35 |
| 50-1.406    | 1.511           | .050 ±.003 | 1.411 ±.013 | .00901 | 38.40                  | 1.25  | 35.85 |
| 149-1.213   | 1.511           | .149 ±.005 | 1.213 ±.012 | .07461 | 38.40                  | 3.80  | 30.80 |
| 1-218       | 1.512           | .139 ±.004 | 1.234 ±.012 | .06545 | 38.40                  | 3.55  | 31.35 |
| 39-1.437    | 1.515           | .039 ±.003 | 1.437 ±.013 | .00554 | 38.50                  | 1.00  | 36.50 |
| 70-1.370ES  | 1.516           | .070 ±.003 | 1.376 ±.013 | .01748 | 38.50                  | 1.80  | 34.95 |
| 93-1.320SS  | 1.518           | .094 ±.003 | 1.330 ±.012 | .03105 | 38.55                  | 2.40  | 33.80 |
| 104-1.311   | 1.519           | .104 ±.003 | 1.311 ±.012 | .03776 | 38.60                  | 2.65  | 33.30 |
| 50-1.420    | 1.520           | .050 ±.003 | 1.420 ±.013 | .00907 | 38.60                  | 1.25  | 36.05 |
| 120-1.280   | 1.520           | .120 ±.004 | 1.280 ±.012 | .04974 | 38.60                  | 3.05  | 32.50 |
| 1-320       | 1.520           | .210 ±.005 | 1.100 ±.012 | .14254 | 38.60                  | 5.35  | 27.95 |
| 92-1.338    | 1.522           | .092 ±.003 | 1.338 ±.012 | .02986 | 38.65                  | 2.35  | 34.00 |
| 140-1.246   | 1.526           | .140 ±.004 | 1.246 ±.012 | .06703 | 38.75                  | 3.55  | 31.65 |
| 71-1.387    | 1.529           | .071 ±.003 | 1.387 ±.013 | .01813 | 38.85                  | 1.80  | 35.25 |
| 60-1.403ES  | 1.530           | .060 ±.003 | 1.410 ±.013 | .01306 | 38.85                  | 1.50  | 35.80 |
| 80-1.370    | 1.530           | .080 ±.003 | 1.370 ±.012 | .02290 | 38.85                  | 2.05  | 34.80 |
| 157-1.220   | 1.534           | .157 ±.005 | 1.220 ±.012 | .08375 | 38.95                  | 4.00  | 31.00 |
| 60-1.415    | 1.535           | .060 ±.003 | 1.415 ±.013 | .01310 | 39.00                  | 1.50  | 35.95 |
| 212-1.111   | 1.535           | .212 ±.005 | 1.111 ±.012 | .14671 | 39.00                  | 5.40  | 28.20 |
| 63-1.394SS  | 1.536           | .064 ±.003 | 1.408 ±.013 | .01488 | 39.00                  | 1.65  | 35.75 |
| 70-1.378VS  | 1.539           | .071 ±.003 | 1.397 ±.013 | .01826 | 39.10                  | 1.80  | 35.50 |
| 77-1.362VS  | 1.543           | .078 ±.003 | 1.387 ±.012 | .02199 | 39.20                  | 2.00  | 35.25 |
| 193-1.158   | 1.544           | .193 ±.005 | 1.158 ±.012 | .12417 | 39.20                  | 4.90  | 29.40 |
| 47-1.453    | 1.547           | .047 ±.003 | 1.453 ±.013 | .00818 | 39.30                  | 1.20  | 36.90 |
| 31-1.491    | 1.553           | .031 ±.003 | 1.491 ±.013 | .00361 | 39.45                  | .80   | 37.85 |
| 39-1.476    | 1.554           | .039 ±.003 | 1.476 ±.013 | .00569 | 39.45                  | 1.00  | 37.50 |
| 250-1.062NS | 1.554           | .249 ±.006 | 1.056 ±.010 | .19964 | 39.45                  | 6.30  | 26.80 |
| 300-957     | 1.557           | .300 ±.006 | .957 ±.010  | .27914 | 39.55                  | 7.60  | 24.30 |
| 38-1.463SS  | 1.563           | .039 ±.003 | 1.485 ±.013 | .00572 | 39.70                  | 1.00  | 37.70 |
| 229-1.099SS | 1.563           | .230 ±.006 | 1.103 ±.012 | .17399 | 39.70                  | 5.85  | 28.00 |
| 70-1.424    | 1.564           | .070 ±.003 | 1.424 ±.013 | .01806 | 39.75                  | 1.80  | 36.15 |
| 75-1.414    | 1.564           | .075 ±.003 | 1.414 ±.012 | .02067 | 39.75                  | 1.90  | 35.90 |



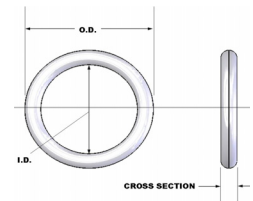
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 139-1.265SS | 1.565           | .141 ±.004 | 1.283 ±.012 | .06985 | 39.75                  | 3.60 | 32.60 |
| 70-1.427    | 1.567           | .070 ±.003 | 1.427 ±.013 | .01810 | 39.80                  | 1.80 | 36.25 |
| 1-126       | 1.568           | .103 ±.003 | 1.362 ±.012 | .03835 | 39.85                  | 2.60 | 34.60 |
| 173-1.225   | 1.571           | .173 ±.005 | 1.225 ±.012 | .10324 | 39.90                  | 4.40 | 31.10 |
| 78-1.417    | 1.573           | .078 ±.003 | 1.417 ±.012 | .02244 | 39.95                  | 2.00 | 36.00 |
| 1-219       | 1.574           | .139 ±.004 | 1.296 ±.012 | .06841 | 40.00                  | 3.55 | 32.90 |
| 176-1.225   | 1.577           | .176 ±.005 | 1.225 ±.012 | .10708 | 40.05                  | 4.45 | 31.10 |
| 215-1.147   | 1.577           | .215 ±.005 | 1.147 ±.012 | .15534 | 40.05                  | 5.45 | 29.15 |
| 321-937     | 1.579           | .321 ±.007 | .937 ±.010  | .31984 | 40.10                  | 8.15 | 23.80 |
| 1-321       | 1.582           | .210 ±.005 | 1.162 ±.012 | .14929 | 40.20                  | 5.35 | 29.50 |
| 1-918       | 1.587           | .116 ±.004 | 1.355 ±.012 | .04884 | 40.30                  | 2.95 | 34.40 |
| 176-1.236   | 1.588           | .176 ±.005 | 1.236 ±.012 | .10792 | 40.35                  | 4.45 | 31.40 |
| 90-1.387SS  | 1.595           | .092 ±.003 | 1.411 ±.012 | .03139 | 40.50                  | 2.35 | 35.85 |
| 70-1.437SS  | 1.596           | .071 ±.003 | 1.454 ±.013 | .01897 | 40.55                  | 1.80 | 36.95 |
| 47-1.484SS  | 1.597           | .048 ±.003 | 1.501 ±.013 | .00881 | 40.55                  | 1.20 | 38.15 |
| 45-1.510    | 1.600           | .045 ±.003 | 1.510 ±.013 | .00777 | 40.65                  | 1.15 | 38.35 |
| 50-1.500    | 1.600           | .050 ±.003 | 1.500 ±.013 | .00956 | 40.65                  | 1.25 | 38.10 |
| 275-1.050   | 1.600           | .275 ±.006 | 1.050 ±.010 | .24724 | 40.65                  | 7.00 | 26.65 |
| 93-1.415    | 1.601           | .093 ±.003 | 1.415 ±.012 | .03218 | 40.65                  | 2.35 | 35.95 |
| 65-1.465ES  | 1.602           | .065 ±.003 | 1.472 ±.013 | .01602 | 40.70                  | 1.65 | 37.40 |
| 70-1.465    | 1.605           | .070 ±.003 | 1.465 ±.013 | .01856 | 40.75                  | 1.80 | 37.20 |
| 210-1.187   | 1.607           | .210 ±.005 | 1.187 ±.012 | .15201 | 40.80                  | 5.35 | 30.15 |
| 62-1.485    | 1.609           | .062 ±.003 | 1.485 ±.013 | .01467 | 40.85                  | 1.55 | 37.70 |
| 55-1.500    | 1.610           | .055 ±.003 | 1.500 ±.013 | .01161 | 40.90                  | 1.40 | 38.10 |
| 63-1.472ES  | 1.614           | .064 ±.003 | 1.486 ±.013 | .01567 | 41.00                  | 1.65 | 37.75 |
| 210-1.200   | 1.620           | .210 ±.005 | 1.200 ±.012 | .15343 | 41.15                  | 5.35 | 30.50 |
| 98-1.417VS  | 1.624           | .099 ±.003 | 1.426 ±.012 | .03688 | 41.25                  | 2.50 | 36.20 |
| 197-1.230   | 1.624           | .197 ±.005 | 1.230 ±.012 | .13665 | 41.25                  | 5.00 | 31.25 |
| 94-1.437    | 1.625           | .094 ±.003 | 1.437 ±.012 | .03338 | 41.30                  | 2.40 | 36.50 |
| 79-1.457ES  | 1.626           | .080 ±.003 | 1.466 ±.012 | .02441 | 41.30                  | 2.05 | 37.25 |
| 1-029       | 1.629           | .070 ±.003 | 1.489 ±.013 | .01885 | 41.40                  | 1.80 | 37.80 |
| 45-1.540    | 1.630           | .045 ±.003 | 1.540 ±.013 | .00792 | 41.40                  | 1.15 | 39.10 |
| 1-127       | 1.630           | .103 ±.003 | 1.424 ±.012 | .03997 | 41.40                  | 2.60 | 36.15 |
| 56-1.506SS  | 1.634           | .057 ±.003 | 1.520 ±.013 | .01264 | 41.50                  | 1.45 | 38.60 |
| 50-1.527ES  | 1.636           | .050 ±.003 | 1.536 ±.013 | .00978 | 41.55                  | 1.25 | 39.00 |
| 1-220       | 1.637           | .139 ±.004 | 1.359 ±.012 | .07141 | 41.60                  | 3.55 | 34.50 |
| 32-1.559SS  | 1.638           | .032 ±.003 | 1.574 ±.013 | .00406 | 41.60                  | .80  | 40.00 |
| 74-1.489ES  | 1.641           | .074 ±.003 | 1.493 ±.012 | .02117 | 41.70                  | 1.90 | 37.90 |
| 140-1.365   | 1.645           | .140 ±.004 | 1.365 ±.012 | .07278 | 41.80                  | 3.55 | 34.65 |
| 1-322       | 1.645           | .210 ±.005 | 1.225 ±.012 | .15615 | 41.80                  | 5.35 | 31.10 |
| 111-1.424   | 1.646           | .111 ±.004 | 1.424 ±.012 | .04667 | 41.80                  | 2.80 | 36.15 |
| 275-1.100   | 1.650           | .275 ±.006 | 1.100 ±.012 | .25657 | 41.90                  | 7.00 | 27.95 |
| 81-1.489    | 1.651           | .081 ±.003 | 1.489 ±.012 | .02542 | 41.95                  | 2.05 | 37.80 |
| 71-1.510    | 1.652           | .071 ±.003 | 1.510 ±.013 | .01966 | 41.95                  | 1.80 | 38.35 |
| 59-1.535    | 1.653           | .059 ±.003 | 1.535 ±.013 | .01369 | 42.00                  | 1.50 | 39.00 |



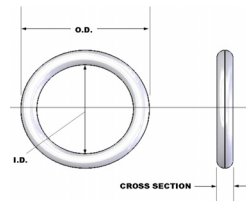
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|--------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S   | ID    |
| 406-844     | 1.656           | .406 ±.009 | .844 ±.010  | .50840 | 42.05                  | 10.30 | 21.45 |
| 212-1.237   | 1.661           | .212 ±.005 | 1.237 ±.012 | .16069 | 42.20                  | 5.40  | 31.40 |
| 105-1.452   | 1.662           | .105 ±.003 | 1.452 ±.012 | .04236 | 42.20                  | 2.65  | 36.90 |
| 275-1.100VS | 1.664           | .275 ±.006 | 1.114 ±.012 | .25918 | 42.25                  | 7.00  | 28.30 |
| 47-1.575    | 1.669           | .047 ±.003 | 1.575 ±.013 | .00884 | 42.40                  | 1.20  | 40.00 |
| 55-1.560    | 1.670           | .055 ±.003 | 1.560 ±.013 | .01205 | 42.40                  | 1.40  | 39.60 |
| 210-1.260   | 1.680           | .210 ±.005 | 1.260 ±.012 | .15995 | 42.65                  | 5.35  | 32.00 |
| 148-1.385   | 1.681           | .148 ±.005 | 1.385 ±.012 | .08285 | 42.70                  | 3.75  | 35.20 |
| 70-1.545    | 1.685           | .070 ±.003 | 1.545 ±.013 | .01953 | 42.80                  | 1.80  | 39.25 |
| 45-1.600    | 1.690           | .045 ±.003 | 1.600 ±.013 | .00822 | 42.95                  | 1.15  | 40.65 |
| 157-1.388SS | 1.692           | .156 ±.005 | 1.380 ±.012 | .09223 | 43.00                  | 3.95  | 35.05 |
| 29-1.620SS  | 1.693           | .029 ±.003 | 1.635 ±.013 | .00345 | 43.00                  | .75   | 41.55 |
| 1-128       | 1.693           | .103 ±.003 | 1.487 ±.012 | .04162 | 43.00                  | 2.60  | 37.75 |
| 30-1.635    | 1.695           | .030 ±.003 | 1.635 ±.013 | .00370 | 43.05                  | .75   | 41.55 |
| 1-221       | 1.699           | .139 ±.004 | 1.421 ±.012 | .07437 | 43.15                  | 3.55  | 36.10 |
| 176-1.350   | 1.702           | .176 ±.005 | 1.350 ±.012 | .11663 | 43.25                  | 4.45  | 34.30 |
| 1-323       | 1.707           | .210 ±.005 | 1.287 ±.012 | .16289 | 43.35                  | 5.35  | 32.70 |
| 104-1.501   | 1.709           | .104 ±.003 | 1.501 ±.012 | .04283 | 43.40                  | 2.65  | 38.15 |
| 67-1.541SS  | 1.710           | .068 ±.003 | 1.574 ±.013 | .01873 | 43.45                  | 1.75  | 40.00 |
| 1-920       | 1.711           | .118 ±.004 | 1.475 ±.012 | .05473 | 43.45                  | 3.00  | 37.45 |
| 140-1.434   | 1.714           | .140 ±.004 | 1.434 ±.012 | .07612 | 43.55                  | 3.55  | 36.40 |
| 76-1.580    | 1.732           | .076 ±.003 | 1.580 ±.015 | .02360 | 44.00                  | 1.95  | 40.15 |
| 92-1.550    | 1.734           | .092 ±.003 | 1.550 ±.015 | .03429 | 44.05                  | 2.35  | 39.35 |
| 45-1.650    | 1.740           | .045 ±.003 | 1.650 ±.013 | .00847 | 44.20                  | 1.15  | 41.90 |
| 250-1.240   | 1.740           | .250 ±.006 | 1.240 ±.012 | .22978 | 44.20                  | 6.35  | 31.50 |
| 59-1.623    | 1.741           | .059 ±.003 | 1.623 ±.013 | .01445 | 44.20                  | 1.50  | 41.20 |
| 114-1.520   | 1.748           | .114 ±.004 | 1.520 ±.015 | .05240 | 44.40                  | 2.90  | 38.60 |
| 1-030       | 1.754           | .070 ±.003 | 1.614 ±.013 | .02036 | 44.55                  | 1.80  | 41.00 |
| 210-1.335   | 1.754           | .210 ±.005 | 1.334 ±.012 | .16801 | 44.55                  | 5.35  | 33.90 |
| 1-129       | 1.755           | .103 ±.003 | 1.549 ±.015 | .04324 | 44.60                  | 2.60  | 39.35 |
| 1-222       | 1.762           | .139 ±.004 | 1.484 ±.015 | .07737 | 44.75                  | 3.55  | 37.70 |
| 180-1.402   | 1.762           | .180 ±.005 | 1.402 ±.012 | .12647 | 44.75                  | 4.55  | 35.60 |
| 78-1.609    | 1.765           | .078 ±.003 | 1.609 ±.015 | .02532 | 44.85                  | 2.00  | 40.85 |
| 125-1.515   | 1.765           | .125 ±.004 | 1.515 ±.015 | .06323 | 44.85                  | 3.20  | 38.50 |
| 47-1.672    | 1.766           | .047 ±.003 | 1.672 ±.013 | .00937 | 44.85                  | 1.20  | 42.45 |
| 29-1.692SS  | 1.767           | .029 ±.003 | 1.709 ±.013 | .00361 | 44.90                  | .75   | 43.40 |
| 138-1.491ES | 1.769           | .138 ±.004 | 1.493 ±.015 | .07664 | 44.95                  | 3.50  | 37.90 |
| 1-324       | 1.770           | .210 ±.005 | 1.350 ±.012 | .16975 | 44.95                  | 5.35  | 34.30 |
| 71-1.629    | 1.771           | .071 ±.003 | 1.629 ±.013 | .02114 | 45.00                  | 1.80  | 41.40 |
| 140-1.491   | 1.771           | .140 ±.004 | 1.491 ±.015 | .07888 | 45.00                  | 3.55  | 37.85 |
| 144-1.484   | 1.772           | .144 ±.005 | 1.484 ±.015 | .08330 | 45.00                  | 3.65  | 37.70 |
| 50-1.675    | 1.775           | .050 ±.003 | 1.675 ±.013 | .01064 | 45.10                  | 1.25  | 42.55 |
| 275-1.225   | 1.775           | .275 ±.006 | 1.225 ±.012 | .27990 | 45.10                  | 7.00  | 31.10 |
| 70-1.614SS  | 1.776           | .071 ±.003 | 1.634 ±.013 | .02121 | 45.10                  | 1.80  | 41.50 |
| 73-1.639    | 1.785           | .073 ±.003 | 1.639 ±.013 | .02251 | 45.35                  | 1.85  | 41.65 |



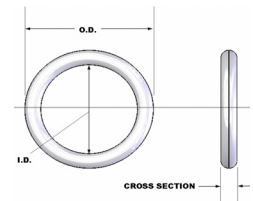
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 31-1.718    | 1.786           | .031 ±.003 | 1.724 ±.013 | .00416 | 45.35                  | .80  | 43.80 |
| 50-1.690    | 1.790           | .050 ±.003 | 1.690 ±.013 | .01073 | 45.45                  | 1.25 | 42.95 |
| 215-1.364   | 1.794           | .215 ±.005 | 1.364 ±.012 | .18009 | 45.55                  | 5.45 | 34.65 |
| 168-1.460   | 1.796           | .168 ±.005 | 1.460 ±.012 | .11337 | 45.60                  | 4.25 | 37.10 |
| 213-1.372   | 1.798           | .213 ±.005 | 1.372 ±.012 | .17743 | 45.65                  | 5.40 | 34.85 |
| 118-1.543VS | 1.801           | .119 ±.004 | 1.563 ±.015 | .05877 | 45.75                  | 3.00 | 39.70 |
| 210-1.373VS | 1.801           | .211 ±.005 | 1.379 ±.012 | .17466 | 45.75                  | 5.35 | 35.05 |
| 70-1.662    | 1.802           | .070 ±.003 | 1.662 ±.013 | .02094 | 45.75                  | 1.80 | 42.20 |
| 39-1.732    | 1.810           | .039 ±.003 | 1.732 ±.013 | .00665 | 45.95                  | 1.00 | 44.00 |
| 62-1.686    | 1.810           | .062 ±.003 | 1.686 ±.013 | .01658 | 45.95                  | 1.55 | 42.80 |
| 70-1.670    | 1.810           | .070 ±.003 | 1.670 ±.013 | .02104 | 45.95                  | 1.80 | 42.40 |
| 1-130       | 1.818           | .103 ±.003 | 1.612 ±.015 | .04489 | 46.20                  | 2.60 | 40.95 |
| 281-1.250NS | 1.820           | .282 ±.006 | 1.256 ±.012 | .30178 | 46.25                  | 7.15 | 31.90 |
| 300-1.220   | 1.820           | .300 ±.006 | 1.220 ±.012 | .33754 | 46.25                  | 7.60 | 31.00 |
| 139-1.546   | 1.824           | .139 ±.004 | 1.546 ±.015 | .08033 | 46.35                  | 3.55 | 39.25 |
| 125-1.575   | 1.825           | .125 ±.004 | 1.575 ±.015 | .06554 | 46.35                  | 3.20 | 40.00 |
| 70-1.687    | 1.827           | .070 ±.003 | 1.687 ±.013 | .02124 | 46.40                  | 1.80 | 42.85 |
| 70-1.690NS  | 1.827           | .070 ±.003 | 1.687 ±.013 | .02124 | 46.40                  | 1.80 | 42.85 |
| 176-1.475   | 1.827           | .176 ±.005 | 1.475 ±.015 | .12619 | 46.40                  | 4.45 | 37.45 |
| 237-1.347SS | 1.828           | .238 ±.006 | 1.352 ±.012 | .22222 | 46.45                  | 6.05 | 34.35 |
| 118-1.583SS | 1.831           | .119 ±.004 | 1.593 ±.015 | .05982 | 46.50                  | 3.00 | 40.45 |
| 104-1.628   | 1.836           | .104 ±.003 | 1.628 ±.015 | .04622 | 46.65                  | 2.65 | 41.35 |
| 118-1.595VS | 1.840           | .119 ±.004 | 1.602 ±.015 | .06013 | 46.75                  | 3.00 | 40.70 |
| 103-1.612SS | 1.847           | .105 ±.003 | 1.637 ±.015 | .04739 | 46.90                  | 2.65 | 41.60 |
| 59-1.732    | 1.850           | .059 ±.003 | 1.732 ±.013 | .01538 | 47.00                  | 1.50 | 44.00 |
| 32-1.790    | 1.854           | .032 ±.003 | 1.790 ±.015 | .00460 | 47.10                  | .80  | 45.45 |
| 62-1.740    | 1.864           | .062 ±.003 | 1.740 ±.015 | .01709 | 47.35                  | 1.55 | 44.20 |
| 39-1.772SS  | 1.865           | .039 ±.003 | 1.787 ±.015 | .00685 | 47.35                  | 1.00 | 45.40 |
| 93-1.689NS  | 1.871           | .093 ±.003 | 1.685 ±.015 | .03794 | 47.50                  | 2.35 | 42.80 |
| 50-1.764ES  | 1.874           | .050 ±.003 | 1.774 ±.015 | .01125 | 47.60                  | 1.25 | 45.05 |
| 50-1.750SS  | 1.877           | .051 ±.003 | 1.775 ±.015 | .01172 | 47.70                  | 1.30 | 45.10 |
| 1-031       | 1.879           | .070 ±.003 | 1.739 ±.015 | .02187 | 47.75                  | 1.80 | 44.15 |
| 1-131       | 1.880           | .103 ±.003 | 1.674 ±.015 | .04652 | 47.75                  | 2.60 | 42.50 |
| 374-1.102VS | 1.881           | .380 ±.007 | 1.121 ±.012 | .53480 | 47.80                  | 9.65 | 28.45 |
| 55-1.775    | 1.885           | .055 ±.003 | 1.775 ±.015 | .01366 | 47.90                  | 1.40 | 45.10 |
| 1-223       | 1.887           | .139 ±.004 | 1.609 ±.015 | .08333 | 47.95                  | 3.55 | 40.85 |
| 107-1.675   | 1.889           | .107 ±.004 | 1.675 ±.015 | .05034 | 48.00                  | 2.70 | 42.55 |
| 157-1.575   | 1.889           | .157 ±.005 | 1.575 ±.015 | .10534 | 48.00                  | 4.00 | 40.00 |
| 108-1.674   | 1.890           | .108 ±.004 | 1.674 ±.015 | .05129 | 48.00                  | 2.75 | 42.50 |
| 259-1.375   | 1.893           | .259 ±.006 | 1.375 ±.012 | .27045 | 48.10                  | 6.60 | 34.95 |
| 1-325       | 1.895           | .210 ±.005 | 1.475 ±.015 | .18335 | 48.15                  | 5.35 | 37.45 |
| 50-1.796    | 1.896           | .050 ±.003 | 1.796 ±.015 | .01139 | 48.15                  | 1.25 | 45.60 |
| 62-1.772    | 1.896           | .062 ±.003 | 1.772 ±.015 | .01739 | 48.15                  | 1.55 | 45.00 |
| 140-1.616   | 1.896           | .140 ±.004 | 1.616 ±.015 | .08492 | 48.15                  | 3.55 | 41.05 |
| 46-1.800    | 1.899           | .046 ±.003 | 1.807 ±.015 | .00967 | 48.25                  | 1.15 | 45.90 |



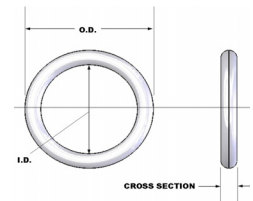
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 1-400       | 1.900           | .275 ±.006 | 1.350 ±.012 | .30322 | 48.25                  | 7.00 | 34.30 |
| 176-1.550   | 1.902           | .176 ±.005 | 1.550 ±.015 | .13192 | 48.30                  | 4.45 | 39.35 |
| 70-1.738VS  | 1.903           | .071 ±.003 | 1.761 ±.015 | .02279 | 48.35                  | 1.80 | 44.75 |
| 40-1.828    | 1.908           | .040 ±.003 | 1.828 ±.015 | .00737 | 48.45                  | 1.00 | 46.45 |
| 141-1.629   | 1.911           | .141 ±.004 | 1.629 ±.015 | .08683 | 48.55                  | 3.60 | 41.40 |
| 70-1.775    | 1.915           | .070 ±.003 | 1.775 ±.015 | .02231 | 48.65                  | 1.80 | 45.10 |
| 103-1.718   | 1.924           | .103 ±.003 | 1.718 ±.015 | .04767 | 48.85                  | 2.60 | 43.65 |
| 118-1.673VS | 1.927           | .119 ±.004 | 1.689 ±.015 | .06317 | 48.95                  | 3.00 | 42.90 |
| 79-1.772    | 1.930           | .079 ±.003 | 1.772 ±.015 | .02850 | 49.00                  | 2.00 | 45.00 |
| 93-1.750    | 1.930           | .093 ±.003 | 1.744 ±.015 | .03920 | 49.00                  | 2.35 | 44.30 |
| 264-1.406   | 1.934           | .264 ±.006 | 1.406 ±.012 | .28719 | 49.10                  | 6.70 | 35.70 |
| 40-1.856    | 1.936           | .040 ±.003 | 1.856 ±.015 | .00749 | 49.15                  | 1.00 | 47.15 |
| 125-1.688   | 1.938           | .125 ±.004 | 1.688 ±.015 | .06990 | 49.25                  | 3.20 | 42.90 |
| 250-1.438   | 1.938           | .250 ±.006 | 1.438 ±.012 | .26031 | 49.25                  | 6.35 | 36.55 |
| 70-1.799    | 1.939           | .070 ±.003 | 1.799 ±.015 | .02260 | 49.25                  | 1.80 | 45.70 |
| 40-1.860    | 1.940           | .040 ±.003 | 1.860 ±.015 | .00750 | 49.30                  | 1.00 | 47.25 |
| 1-132       | 1.943           | .103 ±.003 | 1.737 ±.015 | .04817 | 49.35                  | 2.60 | 44.10 |
| 176-1.600   | 1.952           | .176 ±.005 | 1.600 ±.015 | .13574 | 49.60                  | 4.45 | 40.65 |
| 234-1.485   | 1.953           | .234 ±.006 | 1.485 ±.015 | .23225 | 49.60                  | 5.95 | 37.70 |
| 1-924       | 1.956           | .118 ±.004 | 1.720 ±.015 | .06315 | 49.70                  | 3.00 | 43.70 |
| 210-1.537   | 1.957           | .210 ±.005 | 1.537 ±.015 | .19010 | 49.70                  | 5.35 | 39.05 |
| 180-1.600   | 1.960           | .180 ±.005 | 1.600 ±.015 | .14230 | 49.80                  | 4.55 | 40.65 |
| 234-1.493   | 1.961           | .234 ±.006 | 1.493 ±.015 | .23333 | 49.80                  | 5.95 | 37.90 |
| 104-1.754   | 1.962           | .104 ±.003 | 1.754 ±.015 | .04959 | 49.85                  | 2.65 | 44.55 |
| 50-1.864    | 1.964           | .050 ±.003 | 1.864 ±.015 | .01181 | 49.90                  | 1.25 | 47.35 |
| 98-1.772    | 1.968           | .098 ±.003 | 1.772 ±.015 | .04431 | 50.00                  | 2.50 | 45.00 |
| 70-1.830    | 1.970           | .070 ±.003 | 1.830 ±.015 | .02297 | 50.05                  | 1.80 | 46.50 |
| 286-1.407   | 1.979           | .286 ±.006 | 1.407 ±.012 | .34169 | 50.25                  | 7.25 | 35.75 |
| 114-1.756   | 1.984           | .114 ±.004 | 1.756 ±.015 | .05996 | 50.40                  | 2.90 | 44.60 |
| 47-1.891    | 1.985           | .047 ±.003 | 1.891 ±.015 | .01056 | 50.40                  | 1.20 | 48.05 |
| 231-1.500VS | 1.987           | .234 ±.006 | 1.519 ±.015 | .23684 | 50.45                  | 5.95 | 38.60 |
| 75-1.840    | 1.990           | .075 ±.003 | 1.840 ±.015 | .02658 | 50.55                  | 1.90 | 46.75 |
| 1-032       | 2.004           | .070 ±.003 | 1.864 ±.015 | .02338 | 50.90                  | 1.80 | 47.35 |
| 1-133       | 2.005           | .103 ±.003 | 1.799 ±.015 | .04979 | 50.95                  | 2.60 | 45.70 |
| 79-1.850    | 2.008           | .079 ±.003 | 1.850 ±.015 | .02970 | 51.00                  | 2.00 | 47.00 |
| 299-1.410   | 2.008           | .299 ±.006 | 1.410 ±.012 | .37699 | 51.00                  | 7.60 | 35.80 |
| 1-224       | 2.012           | .139 ±.004 | 1.734 ±.015 | .08929 | 51.10                  | 3.55 | 44.05 |
| 104-1.808   | 2.016           | .104 ±.003 | 1.808 ±.015 | .05103 | 51.20                  | 2.65 | 45.90 |
| 103-1.812   | 2.018           | .103 ±.003 | 1.812 ±.015 | .05013 | 51.25                  | 2.60 | 46.00 |
| 43-1.934    | 2.020           | .043 ±.003 | 1.934 ±.015 | .00902 | 51.30                  | 1.10 | 49.10 |
| 1-326       | 2.020           | .210 ±.005 | 1.600 ±.015 | .19695 | 51.30                  | 5.35 | 40.65 |
| 1-401       | 2.025           | .275 ±.006 | 1.475 ±.015 | .32655 | 51.45                  | 7.00 | 37.45 |
| 167-1.693   | 2.027           | .167 ±.005 | 1.693 ±.015 | .12799 | 51.50                  | 4.25 | 43.00 |
| 47-1.934    | 2.028           | .047 ±.003 | 1.934 ±.015 | .01080 | 51.50                  | 1.20 | 49.10 |
| 140-1.750   | 2.030           | .140 ±.004 | 1.750 ±.015 | .09140 | 51.55                  | 3.55 | 44.45 |



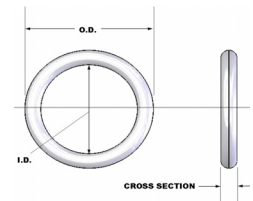
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|-------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| 40-1.958    | 2.038           | .040 ±.003 | 1.958 ±.015 | .00789 | 51.75                  | 1.00 | 49.75 |
| 212-1.616   | 2.040           | .212 ±.005 | 1.616 ±.015 | .20272 | 51.80                  | 5.40 | 41.05 |
| 70-1.864SS  | 2.042           | .071 ±.003 | 1.900 ±.015 | .02452 | 51.85                  | 1.80 | 48.25 |
| 225-1.595PL | 2.045           | .225 ±.006 | 1.595 ±.015 | .22734 | 51.95                  | 5.70 | 40.50 |
| 39-1.969    | 2.047           | .039 ±.003 | 1.969 ±.015 | .00754 | 52.00                  | 1.00 | 50.00 |
| 25-2.000    | 2.050           | .025 ±.003 | 2.000 ±.018 | .00312 | 52.05                  | .65  | 50.80 |
| 39-1.969SS  | 2.055           | .039 ±.003 | 1.977 ±.015 | .00757 | 52.20                  | 1.00 | 50.20 |
| 47-1.954    | 2.055           | .047 ±.003 | 1.961 ±.015 | .01094 | 52.20                  | 1.20 | 49.80 |
| 47-1.954SS  | 2.055           | .047 ±.003 | 1.961 ±.015 | .01094 | 52.20                  | 1.20 | 49.80 |
| 38-1.984    | 2.060           | .038 ±.003 | 1.984 ±.015 | .00720 | 52.30                  | .95  | 50.40 |
| 38-1.980ES  | 2.061           | .038 ±.003 | 1.985 ±.015 | .00725 | 52.35                  | .95  | 50.40 |
| 125-1.812   | 2.062           | .125 ±.004 | 1.812 ±.015 | .07468 | 52.35                  | 3.20 | 46.00 |
| 250-1.562   | 2.062           | .250 ±.006 | 1.562 ±.015 | .27943 | 52.35                  | 6.35 | 39.65 |
| 70-1.927    | 2.067           | .070 ±.003 | 1.927 ±.015 | .02414 | 52.50                  | 1.80 | 48.95 |
| 1-134       | 2.068           | .103 ±.003 | 1.862 ±.015 | .05144 | 52.55                  | 2.60 | 47.30 |
| 139-1.790   | 2.068           | .139 ±.004 | 1.790 ±.015 | .09196 | 52.55                  | 3.55 | 45.45 |
| 93-1.888    | 2.074           | .093 ±.003 | 1.888 ±.015 | .04228 | 52.70                  | 2.35 | 47.95 |
| 176-1.725   | 2.077           | .176 ±.005 | 1.725 ±.015 | .14529 | 52.75                  | 4.45 | 43.80 |
| 237-1.597SS | 2.079           | .238 ±.006 | 1.603 ±.015 | .25730 | 52.80                  | 6.05 | 40.70 |
| 80-1.921    | 2.081           | .080 ±.003 | 1.921 ±.015 | .03160 | 52.85                  | 2.05 | 48.80 |
| 63-1.969    | 2.095           | .063 ±.003 | 1.969 ±.015 | .01990 | 53.20                  | 1.60 | 50.00 |
| 93-1.888ES  | 2.098           | .094 ±.003 | 1.910 ±.015 | .04369 | 53.30                  | 2.40 | 48.50 |
| 176-1.747   | 2.099           | .176 ±.005 | 1.747 ±.015 | .14698 | 53.30                  | 4.45 | 44.35 |
| 103-1.889SS | 2.117           | .104 ±.003 | 1.909 ±.015 | .05372 | 53.75                  | 2.65 | 48.50 |
| 60-1.993ES  | 2.118           | .060 ±.003 | 1.998 ±.018 | .01828 | 53.80                  | 1.50 | 50.75 |
| 119-1.888   | 2.126           | .119 ±.004 | 1.888 ±.018 | .07013 | 54.00                  | 3.00 | 47.95 |
| 1-033       | 2.129           | .070 ±.003 | 1.989 ±.018 | .02489 | 54.10                  | 1.80 | 50.50 |
| 1-135       | 2.131           | .103 ±.003 | 1.925 ±.017 | .05309 | 54.15                  | 2.60 | 48.90 |
| 1-225       | 2.137           | .139 ±.004 | 1.859 ±.018 | .09525 | 54.30                  | 3.55 | 47.20 |
| 60-1.993SS  | 2.143           | .061 ±.003 | 2.021 ±.018 | .01912 | 54.45                  | 1.55 | 51.35 |
| 1-327       | 2.145           | .210 ±.005 | 1.725 ±.015 | .21055 | 54.50                  | 5.35 | 43.80 |
| 1-402       | 2.150           | .275 ±.006 | 1.600 ±.015 | .34987 | 54.60                  | 7.00 | 40.65 |
| 104-1.943   | 2.151           | .104 ±.003 | 1.943 ±.017 | .05463 | 54.65                  | 2.65 | 49.35 |
| 71-2.014    | 2.156           | .071 ±.003 | 2.014 ±.018 | .02593 | 54.75                  | 1.80 | 51.15 |
| 140-1.878   | 2.158           | .140 ±.004 | 1.878 ±.018 | .09759 | 54.80                  | 3.55 | 47.70 |
| 80-2.000    | 2.160           | .080 ±.003 | 2.000 ±.017 | .03285 | 54.85                  | 2.05 | 50.80 |
| 250-1.660   | 2.160           | .250 ±.006 | 1.660 ±.015 | .29455 | 54.85                  | 6.35 | 42.15 |
| 36-2.050SS  | 2.163           | .037 ±.003 | 2.089 ±.018 | .00718 | 54.95                  | .95  | 53.05 |
| 40-2.044SS  | 2.169           | .041 ±.003 | 2.087 ±.018 | .00883 | 55.10                  | 1.05 | 53.00 |
| 50-2.070    | 2.170           | .050 ±.003 | 2.070 ±.018 | .01308 | 55.10                  | 1.25 | 52.60 |
| 70-2.030    | 2.170           | .070 ±.003 | 2.030 ±.018 | .02539 | 55.10                  | 1.80 | 51.55 |
| 103-1.968   | 2.174           | .103 ±.003 | 1.968 ±.017 | .05421 | 55.20                  | 2.60 | 50.00 |
| 70-2.050    | 2.190           | .070 ±.003 | 2.050 ±.018 | .02563 | 55.65                  | 1.80 | 52.05 |
| 210-1.772   | 2.192           | .210 ±.005 | 1.772 ±.015 | .21567 | 55.70                  | 5.35 | 45.00 |
| 1-136       | 2.193           | .103 ±.003 | 1.987 ±.017 | .05471 | 55.70                  | 2.60 | 50.45 |



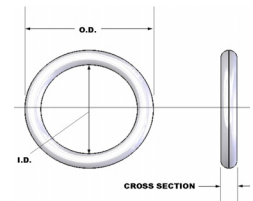
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|--------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S   | ID    |
| 225-1.745   | 2.195           | .225 ±.006 | 1.745 ±.015 | .24608 | 55.75                  | 5.70  | 44.30 |
| 70-2.057ES  | 2.200           | .070 ±.003 | 2.060 ±.018 | .02575 | 55.90                  | 1.80  | 52.30 |
| 125-1.950   | 2.200           | .125 ±.004 | 1.950 ±.018 | .08000 | 55.90                  | 3.20  | 49.55 |
| 176-1.850   | 2.202           | .176 ±.005 | 1.850 ±.015 | .15485 | 55.95                  | 4.45  | 47.00 |
| 275-1.655   | 2.205           | .275 ±.006 | 1.655 ±.015 | .36013 | 56.00                  | 7.00  | 42.05 |
| 210-1.787   | 2.207           | .210 ±.005 | 1.787 ±.015 | .21730 | 56.05                  | 5.35  | 45.40 |
| 75-2.066    | 2.216           | .075 ±.003 | 2.066 ±.017 | .02972 | 56.30                  | 1.90  | 52.50 |
| 125-1.968   | 2.217           | .125 ±.004 | 1.967 ±.018 | .08065 | 56.30                  | 3.20  | 49.95 |
| 47-2.115SS  | 2.218           | .047 ±.003 | 2.124 ±.018 | .01183 | 56.35                  | 1.20  | 53.95 |
| 312-1.594   | 2.218           | .312 ±.006 | 1.594 ±.015 | .45780 | 56.35                  | 7.90  | 40.50 |
| 118-1.969SS | 2.224           | .119 ±.004 | 1.986 ±.018 | .07355 | 56.50                  | 3.00  | 50.45 |
| 40-2.152    | 2.232           | .040 ±.003 | 2.152 ±.018 | .00865 | 56.70                  | 1.00  | 54.65 |
| 101-2.015SS | 2.234           | .102 ±.003 | 2.030 ±.017 | .05473 | 56.75                  | 2.60  | 51.55 |
| 47-2.141    | 2.235           | .047 ±.003 | 2.141 ±.018 | .01193 | 56.75                  | 1.20  | 54.40 |
| 105-2.028   | 2.238           | .105 ±.003 | 2.028 ±.017 | .05802 | 56.85                  | 2.65  | 51.50 |
| 47-2.141ES  | 2.240           | .047 ±.003 | 2.146 ±.008 | .01195 | 56.90                  | 1.20  | 54.50 |
| 70-2.093SS  | 2.242           | .070 ±.003 | 2.102 ±.018 | .02626 | 56.95                  | 1.80  | 53.40 |
| 59-2.126    | 2.244           | .059 ±.003 | 2.126 ±.018 | .01877 | 57.00                  | 1.50  | 54.00 |
| 250-1.750   | 2.250           | .250 ±.006 | 1.750 ±.015 | .30843 | 57.15                  | 6.35  | 44.45 |
| 1-034       | 2.254           | .070 ±.003 | 2.114 ±.018 | .02641 | 57.25                  | 1.80  | 53.70 |
| 93-2.065VS  | 2.256           | .093 ±.003 | 2.070 ±.017 | .04616 | 57.30                  | 2.35  | 52.60 |
| 1-137       | 2.256           | .103 ±.003 | 2.050 ±.017 | .05636 | 57.30                  | 2.60  | 52.05 |
| 40-2.177    | 2.257           | .040 ±.003 | 2.177 ±.018 | .00875 | 57.35                  | 1.00  | 55.30 |
| 1-226       | 2.262           | .139 ±.004 | 1.984 ±.018 | .10121 | 57.45                  | 3.55  | 50.40 |
| 70-2.124    | 2.264           | .070 ±.003 | 2.124 ±.018 | .02653 | 57.50                  | 1.80  | 53.95 |
| 147-1.976   | 2.270           | .147 ±.005 | 1.976 ±.018 | .11319 | 57.65                  | 3.75  | 50.20 |
| 1-328       | 2.270           | .210 ±.005 | 1.850 ±.015 | .22415 | 57.65                  | 5.35  | 47.00 |
| 1-403       | 2.275           | .275 ±.006 | 1.725 ±.015 | .37319 | 57.80                  | 7.00  | 43.80 |
| 139-1.954SS | 2.280           | .142 ±.004 | 1.996 ±.018 | .10637 | 57.90                  | 3.60  | 50.70 |
| 78-2.125    | 2.281           | .078 ±.003 | 2.125 ±.017 | .03307 | 57.95                  | 2.00  | 54.00 |
| 157-1.968   | 2.282           | .157 ±.005 | 1.968 ±.015 | .12924 | 57.95                  | 4.00  | 50.00 |
| 42-2.199    | 2.283           | .042 ±.003 | 2.199 ±.018 | .00975 | 58.00                  | 1.05  | 55.85 |
| 140-2.003   | 2.283           | .140 ±.004 | 2.003 ±.018 | .10364 | 58.00                  | 3.55  | 50.90 |
| 70-2.156    | 2.296           | .070 ±.003 | 2.156 ±.018 | .02691 | 58.30                  | 1.80  | 54.75 |
| 79-2.135ES  | 2.298           | .079 ±.003 | 2.140 ±.017 | .03417 | 58.35                  | 2.00  | 54.35 |
| 430-1.438   | 2.298           | .430 ±.009 | 1.438 ±.012 | .85222 | 58.35                  | 10.90 | 36.55 |
| 275-1.745VS | 2.303           | .276 ±.006 | 1.751 ±.015 | .38099 | 58.50                  | 7.00  | 44.50 |
| 62-2.187    | 2.311           | .062 ±.003 | 2.187 ±.018 | .02133 | 58.70                  | 1.55  | 55.55 |
| 156-2.000   | 2.312           | .156 ±.005 | 2.000 ±.018 | .12946 | 58.70                  | 3.95  | 50.80 |
| 285-1.735VS | 2.313           | .286 ±.006 | 1.741 ±.015 | .40910 | 58.75                  | 7.25  | 44.20 |
| 70-2.175    | 2.315           | .070 ±.003 | 2.175 ±.018 | .02714 | 58.80                  | 1.80  | 55.25 |
| 1-138       | 2.318           | .103 ±.003 | 2.112 ±.017 | .05798 | 58.90                  | 2.60  | 53.65 |
| 237-1.848   | 2.322           | .237 ±.006 | 1.848 ±.015 | .28896 | 59.00                  | 6.00  | 46.95 |
| 139-2.046   | 2.324           | .139 ±.004 | 2.046 ±.018 | .10416 | 59.05                  | 3.55  | 51.95 |
| 176-1.944SS | 2.324           | .178 ±.005 | 1.968 ±.015 | .16777 | 59.05                  | 4.50  | 50.00 |



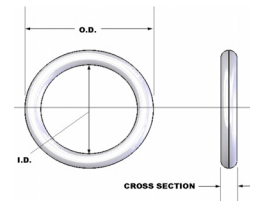
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |        | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|--------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume | OD                     | C/S   | ID    |
| 1-928       | 2.326           | .118 ±.004 | 2.090 ±.018 | .07586 | 59.10                  | 3.00  | 53.10 |
| 176-1.975   | 2.327           | .176 ±.005 | 1.975 ±.018 | .16440 | 59.10                  | 4.45  | 50.15 |
| 40-2.249    | 2.329           | .040 ±.003 | 2.249 ±.018 | .00904 | 59.15                  | 1.00  | 57.10 |
| 210-1.912   | 2.332           | .210 ±.005 | 1.912 ±.015 | .23090 | 59.25                  | 5.35  | 48.55 |
| 108-2.100VS | 2.335           | .109 ±.004 | 2.117 ±.020 | .06526 | 59.30                  | 2.75  | 53.75 |
| 70-2.175VS  | 2.337           | .071 ±.003 | 2.195 ±.018 | .02818 | 59.35                  | 1.80  | 55.75 |
| 235-1.845SS | 2.345           | .238 ±.006 | 1.869 ±.015 | .29448 | 59.55                  | 6.05  | 47.45 |
| 80-2.200NS  | 2.350           | .079 ±.003 | 2.192 ±.017 | .03497 | 59.70                  | 2.00  | 55.70 |
| 250-1.860   | 2.360           | .250 ±.006 | 1.860 ±.015 | .32539 | 59.95                  | 6.35  | 47.25 |
| 210-1.950   | 2.370           | .210 ±.005 | 1.950 ±.015 | .23503 | 60.20                  | 5.35  | 49.55 |
| 437-1.500   | 2.374           | .437 ±.009 | 1.500 ±.015 | .91271 | 60.30                  | 11.10 | 38.10 |
| 375-1.625   | 2.375           | .375 ±.007 | 1.625 ±.015 | .69396 | 60.35                  | 9.55  | 41.30 |
| 1-035       | 2.379           | .070 ±.003 | 2.239 ±.018 | .02792 | 60.45                  | 1.80  | 56.85 |
| 1-139       | 2.381           | .103 ±.003 | 2.175 ±.017 | .05963 | 60.50                  | 2.60  | 55.25 |
| 1-227       | 2.387           | .139 ±.004 | 2.109 ±.018 | .10717 | 60.65                  | 3.55  | 53.55 |
| 70-2.249    | 2.389           | .070 ±.003 | 2.249 ±.018 | .02804 | 60.70                  | 1.80  | 57.10 |
| 70-2.250    | 2.390           | .070 ±.003 | 2.250 ±.018 | .02805 | 60.70                  | 1.80  | 57.15 |
| 125-2.140   | 2.390           | .125 ±.004 | 2.140 ±.018 | .08732 | 60.70                  | 3.20  | 54.35 |
| 83-2.226    | 2.392           | .083 ±.003 | 2.226 ±.017 | .03925 | 60.75                  | 2.10  | 56.55 |
| 1-329       | 2.395           | .210 ±.005 | 1.975 ±.018 | .23776 | 60.85                  | 5.35  | 50.15 |
| 210-1.975PL | 2.395           | .210 ±.005 | 1.975 ±.018 | .23776 | 60.85                  | 5.35  | 50.15 |
| 1-404       | 2.400           | .275 ±.006 | 1.850 ±.015 | .39652 | 60.95                  | 7.00  | 47.00 |
| 60-2.287    | 2.407           | .060 ±.003 | 2.287 ±.018 | .02085 | 61.15                  | 1.50  | 58.10 |
| 140-2.131   | 2.411           | .140 ±.004 | 2.131 ±.018 | .10983 | 61.25                  | 3.55  | 54.15 |
| 211-1.989   | 2.411           | .211 ±.005 | 1.989 ±.018 | .24167 | 61.25                  | 5.35  | 50.50 |
| 224-1.941VS | 2.411           | .226 ±.006 | 1.959 ±.015 | .27536 | 61.25                  | 5.75  | 49.75 |
| 40-2.342    | 2.422           | .040 ±.003 | 2.342 ±.018 | .00940 | 61.50                  | 1.00  | 59.50 |
| 357-1.719   | 2.433           | .357 ±.007 | 1.719 ±.015 | .65284 | 61.80                  | 9.05  | 43.65 |
| 17-2.400    | 2.434           | .017 ±.003 | 2.400 ±.018 | .00172 | 61.80                  | .45   | 60.95 |
| 176-2.085   | 2.437           | .176 ±.005 | 2.085 ±.018 | .17281 | 61.90                  | 4.45  | 52.95 |
| 118-2.175VS | 2.439           | .119 ±.004 | 2.201 ±.018 | .08106 | 61.95                  | 3.00  | 55.90 |
| 1-140       | 2.443           | .103 ±.003 | 2.237 ±.017 | .06125 | 62.05                  | 2.60  | 56.80 |
| 47-2.350    | 2.444           | .047 ±.003 | 2.350 ±.018 | .01306 | 62.10                  | 1.20  | 59.70 |
| 70-2.307    | 2.447           | .070 ±.003 | 2.307 ±.018 | .02874 | 62.15                  | 1.80  | 58.60 |
| 176-2.100   | 2.452           | .176 ±.005 | 2.100 ±.018 | .17396 | 62.30                  | 4.45  | 53.35 |
| 158-2.126ES | 2.455           | .159 ±.005 | 2.137 ±.018 | .14322 | 62.35                  | 4.05  | 54.30 |
| 114-2.228   | 2.456           | .114 ±.004 | 2.228 ±.020 | .07510 | 62.40                  | 2.90  | 56.60 |
| 93-2.277    | 2.463           | .093 ±.003 | 2.277 ±.017 | .05058 | 62.55                  | 2.35  | 57.85 |
| 79-2.283ES  | 2.464           | .080 ±.003 | 2.304 ±.020 | .03765 | 62.60                  | 2.05  | 58.50 |
| 98-2.283    | 2.479           | .098 ±.003 | 2.283 ±.017 | .05642 | 62.95                  | 2.50  | 58.00 |
| 40-2.400    | 2.480           | .040 ±.003 | 2.400 ±.018 | .00963 | 63.00                  | 1.00  | 60.95 |
| 187-2.125   | 2.499           | .187 ±.005 | 2.125 ±.018 | .19949 | 63.45                  | 4.75  | 54.00 |
| 53-2.394    | 2.500           | .053 ±.003 | 2.394 ±.018 | .01696 | 63.50                  | 1.35  | 60.80 |
| 125-2.250   | 2.500           | .125 ±.004 | 2.250 ±.020 | .09156 | 63.50                  | 3.20  | 57.15 |
| 224-2.052   | 2.500           | .224 ±.006 | 2.052 ±.018 | .28178 | 63.50                  | 5.70  | 52.10 |



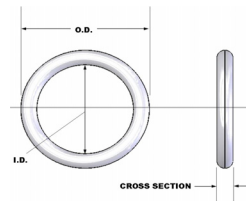
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID    |
| 500-1.500   | 2.500           | .500 ±.010 | 1.500 ±.015 | 1.23370 | 63.50                  | 12.70 | 38.10 |
| 1-036       | 2.504           | .070 ±.003 | 2.364 ±.018 | .02943  | 63.60                  | 1.80  | 60.05 |
| 1-141       | 2.506           | .103 ±.003 | 2.300 ±.020 | .06290  | 63.65                  | 2.60  | 58.40 |
| 1-228       | 2.512           | .139 ±.004 | 2.234 ±.020 | .11313  | 63.80                  | 3.55  | 56.75 |
| 79-2.362    | 2.520           | .079 ±.003 | 2.362 ±.020 | .03759  | 64.00                  | 2.00  | 60.00 |
| 1-330       | 2.520           | .210 ±.005 | 2.100 ±.018 | .25136  | 64.00                  | 5.35  | 53.35 |
| 176-2.145VS | 2.525           | .178 ±.005 | 2.169 ±.018 | .18348  | 64.15                  | 4.50  | 55.10 |
| 1-405       | 2.525           | .275 ±.006 | 1.975 ±.018 | .41984  | 64.15                  | 7.00  | 50.15 |
| 30-2.472SS  | 2.542           | .030 ±.003 | 2.482 ±.018 | .00558  | 64.55                  | .75   | 63.05 |
| 103-2.340   | 2.546           | .103 ±.003 | 2.340 ±.020 | .06395  | 64.65                  | 2.60  | 59.45 |
| 185-2.187   | 2.557           | .185 ±.005 | 2.187 ±.018 | .20031  | 64.95                  | 4.70  | 55.55 |
| 282-1.986VS | 2.561           | .283 ±.006 | 1.995 ±.018 | .45016  | 65.05                  | 7.20  | 50.65 |
| 70-2.425    | 2.565           | .070 ±.003 | 2.425 ±.018 | .03017  | 65.15                  | 1.80  | 61.60 |
| 243-2.060VS | 2.567           | .245 ±.006 | 2.077 ±.018 | .34390  | 65.20                  | 6.20  | 52.75 |
| 1-142       | 2.568           | .103 ±.003 | 2.362 ±.020 | .06453  | 65.25                  | 2.60  | 60.00 |
| 1-932       | 2.573           | .118 ±.004 | 2.337 ±.020 | .08434  | 65.35                  | 3.00  | 59.35 |
| 176-2.225   | 2.577           | .176 ±.005 | 2.225 ±.018 | .18351  | 65.45                  | 4.45  | 56.50 |
| 118-2.342   | 2.578           | .118 ±.004 | 2.342 ±.020 | .08452  | 65.50                  | 3.00  | 59.50 |
| 70-2.440    | 2.580           | .070 ±.003 | 2.440 ±.018 | .03035  | 65.55                  | 1.80  | 62.00 |
| 210-2.162   | 2.582           | .210 ±.005 | 2.162 ±.018 | .25810  | 65.60                  | 5.35  | 54.90 |
| 70-2.440    | 2.587           | .070 ±.003 | 2.447 ±.018 | .03043  | 65.70                  | 1.80  | 62.15 |
| 32-2.500SS  | 2.588           | .032 ±.003 | 2.524 ±.018 | .00646  | 65.75                  | .80   | 64.10 |
| 70-2.410SS  | 2.589           | .071 ±.003 | 2.447 ±.018 | .03132  | 65.75                  | 1.80  | 62.15 |
| 285-2.027   | 2.597           | .285 ±.006 | 2.027 ±.018 | .46336  | 65.95                  | 7.25  | 51.50 |
| 47-2.495SS  | 2.620           | .048 ±.003 | 2.524 ±.018 | .01462  | 66.55                  | 1.20  | 64.10 |
| 1-037       | 2.629           | .070 ±.003 | 2.489 ±.018 | .03094  | 66.80                  | 1.80  | 63.20 |
| 40-2.550    | 2.630           | .040 ±.003 | 2.550 ±.018 | .01022  | 66.80                  | 1.00  | 64.75 |
| 1-143       | 2.631           | .103 ±.003 | 2.425 ±.020 | .06617  | 66.85                  | 2.60  | 61.60 |
| 50-2.520VS  | 2.634           | .050 ±.003 | 2.534 ±.018 | .01594  | 66.90                  | 1.25  | 64.35 |
| 1-229       | 2.637           | .139 ±.004 | 2.359 ±.020 | .11909  | 67.00                  | 3.55  | 59.90 |
| 1-331       | 2.645           | .210 ±.005 | 2.225 ±.018 | .26496  | 67.20                  | 5.35  | 56.50 |
| 187-2.272   | 2.646           | .187 ±.005 | 2.272 ±.018 | .21217  | 67.20                  | 4.75  | 57.70 |
| 1-406       | 2.650           | .275 ±.006 | 2.100 ±.018 | .44317  | 67.30                  | 7.00  | 53.35 |
| 103-2.450   | 2.656           | .103 ±.003 | 2.450 ±.020 | .06683  | 67.45                  | 2.60  | 62.25 |
| 375-1.906   | 2.656           | .375 ±.007 | 1.906 ±.018 | .79146  | 67.45                  | 9.55  | 48.40 |
| 140-2.381   | 2.661           | .140 ±.004 | 2.381 ±.020 | .12192  | 67.60                  | 3.55  | 60.50 |
| 168-2.328   | 2.664           | .168 ±.005 | 2.328 ±.018 | .17382  | 67.65                  | 4.25  | 59.15 |
| 79-2.480SS  | 2.668           | .080 ±.003 | 2.508 ±.020 | .04087  | 67.75                  | 2.05  | 63.70 |
| 215-2.231ES | 2.673           | .216 ±.006 | 2.241 ±.018 | .28285  | 67.90                  | 5.50  | 56.90 |
| 1-144       | 2.693           | .103 ±.003 | 2.487 ±.020 | .06780  | 68.40                  | 2.60  | 63.15 |
| 335-2.027   | 2.697           | .335 ±.007 | 2.027 ±.018 | .65405  | 68.50                  | 8.50  | 51.50 |
| 70-2.560    | 2.700           | .070 ±.003 | 2.560 ±.018 | .03180  | 68.60                  | 1.80  | 65.00 |
| 150-2.400   | 2.700           | .150 ±.005 | 2.400 ±.018 | .14157  | 68.60                  | 3.80  | 60.95 |
| 250-2.200   | 2.700           | .250 ±.006 | 2.200 ±.018 | .37782  | 68.60                  | 6.35  | 55.90 |
| 176-2.350   | 2.702           | .176 ±.005 | 2.350 ±.018 | .19306  | 68.65                  | 4.45  | 59.70 |



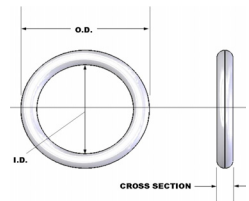
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID    |
| 108-2.487   | 2.703           | .108 ±.004 | 2.487 ±.020 | .07468  | 68.65                  | 2.75  | 63.15 |
| 139-2.425   | 2.703           | .139 ±.004 | 2.425 ±.020 | .12223  | 68.65                  | 3.55  | 61.60 |
| 105-2.500   | 2.710           | .105 ±.003 | 2.500 ±.020 | .07086  | 68.85                  | 2.65  | 63.50 |
| 245-2.235   | 2.725           | .245 ±.006 | 2.235 ±.018 | .36730  | 69.20                  | 6.20  | 56.75 |
| 47-2.641    | 2.735           | .047 ±.003 | 2.641 ±.020 | .01465  | 69.45                  | 1.20  | 67.10 |
| 80-2.585    | 2.745           | .080 ±.003 | 2.585 ±.020 | .04208  | 69.70                  | 2.05  | 65.65 |
| 187-2.375   | 2.749           | .187 ±.005 | 2.375 ±.018 | .22106  | 69.80                  | 4.75  | 60.35 |
| 1-038       | 2.754           | .070 ±.003 | 2.614 ±.020 | .03245  | 69.95                  | 1.80  | 66.40 |
| 1-145       | 2.756           | .103 ±.003 | 2.550 ±.020 | .06945  | 70.00                  | 2.60  | 64.75 |
| 48-2.666    | 2.762           | .048 ±.003 | 2.666 ±.020 | .01543  | 70.15                  | 1.20  | 67.70 |
| 1-230       | 2.762           | .139 ±.004 | 2.484 ±.020 | .12505  | 70.15                  | 3.55  | 63.10 |
| 70-2.627    | 2.767           | .070 ±.003 | 2.627 ±.020 | .03261  | 70.30                  | 1.80  | 66.75 |
| 1-332       | 2.770           | .210 ±.005 | 2.350 ±.018 | .27856  | 70.35                  | 5.35  | 59.70 |
| 1-407       | 2.775           | .275 ±.006 | 2.225 ±.018 | .46649  | 70.50                  | 7.00  | 56.50 |
| 118-2.520VS | 2.791           | .120 ±.004 | 2.551 ±.020 | .09490  | 70.90                  | 3.05  | 64.80 |
| 217-2.362   | 2.796           | .217 ±.006 | 2.362 ±.018 | .29965  | 71.00                  | 5.50  | 60.00 |
| 275-2.250   | 2.800           | .275 ±.006 | 2.250 ±.018 | .47116  | 71.10                  | 7.00  | 57.15 |
| 215-2.373   | 2.803           | .215 ±.005 | 2.373 ±.018 | .29518  | 71.20                  | 5.45  | 60.25 |
| 71-2.638VS  | 2.810           | .072 ±.003 | 2.666 ±.020 | .03502  | 71.35                  | 1.85  | 67.70 |
| 224-2.362   | 2.810           | .224 ±.006 | 2.362 ±.018 | .32016  | 71.35                  | 5.70  | 60.00 |
| 70-2.677    | 2.817           | .070 ±.003 | 2.677 ±.020 | .03321  | 71.55                  | 1.80  | 68.00 |
| 179-2.459   | 2.817           | .179 ±.005 | 2.459 ±.018 | .20856  | 71.55                  | 4.55  | 62.45 |
| 1-146       | 2.818           | .103 ±.003 | 2.612 ±.020 | .07107  | 71.60                  | 2.60  | 66.35 |
| 50-2.719    | 2.819           | .050 ±.003 | 2.719 ±.020 | .01708  | 71.60                  | 1.25  | 69.05 |
| 176-2.475   | 2.827           | .176 ±.005 | 2.475 ±.020 | .20262  | 71.80                  | 4.45  | 62.85 |
| 118-2.584ES | 2.834           | .119 ±.004 | 2.596 ±.020 | .09486  | 72.00                  | 3.00  | 65.95 |
| 450-1.937   | 2.837           | .450 ±.010 | 1.937 ±.018 | 1.19266 | 72.05                  | 11.45 | 49.20 |
| 104-2.637   | 2.845           | .104 ±.003 | 2.637 ±.020 | .07315  | 72.25                  | 2.65  | 67.00 |
| 70-2.690VS  | 2.857           | .071 ±.003 | 2.715 ±.020 | .03465  | 72.55                  | 1.80  | 68.95 |
| 84-2.661SS  | 2.872           | .085 ±.003 | 2.702 ±.022 | .04968  | 72.95                  | 2.15  | 68.65 |
| 500-1.875   | 2.875           | .500 ±.010 | 1.875 ±.015 | 1.46502 | 73.05                  | 12.70 | 47.65 |
| 1-039       | 2.879           | .070 ±.003 | 2.739 ±.020 | .03396  | 73.15                  | 1.80  | 69.55 |
| 139-2.601   | 2.879           | .139 ±.004 | 2.601 ±.020 | .13062  | 73.15                  | 3.55  | 66.05 |
| 1-147       | 2.881           | .103 ±.003 | 2.675 ±.022 | .07272  | 73.20                  | 2.60  | 67.95 |
| 1-231       | 2.887           | .139 ±.004 | 2.609 ±.020 | .13100  | 73.35                  | 3.55  | 66.25 |
| 63-2.766    | 2.892           | .063 ±.003 | 2.766 ±.020 | .02770  | 73.45                  | 1.60  | 70.25 |
| 70-2.750ES  | 2.894           | .070 ±.003 | 2.754 ±.020 | .03414  | 73.50                  | 1.80  | 69.95 |
| 1-333       | 2.895           | .210 ±.005 | 2.475 ±.020 | .29216  | 73.55                  | 5.35  | 62.85 |
| 1-408       | 2.900           | .275 ±.006 | 2.350 ±.018 | .48982  | 73.65                  | 7.00  | 59.70 |
| 115-2.683   | 2.913           | .115 ±.004 | 2.683 ±.020 | .09130  | 74.00                  | 2.90  | 68.15 |
| 144-2.629   | 2.917           | .144 ±.005 | 2.629 ±.020 | .14188  | 74.10                  | 3.65  | 66.80 |
| 312-2.312   | 2.926           | .311 ±.006 | 2.304 ±.020 | .62407  | 74.30                  | 7.90  | 58.50 |
| 176-2.534SS | 2.931           | .179 ±.005 | 2.573 ±.020 | .21757  | 74.45                  | 4.55  | 65.35 |
| 70-2.739SS  | 2.934           | .071 ±.003 | 2.792 ±.020 | .03561  | 74.50                  | 1.80  | 70.90 |
| 238-2.458   | 2.934           | .238 ±.006 | 2.458 ±.018 | .37680  | 74.50                  | 6.05  | 62.45 |



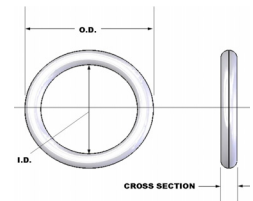
# Engineers Guide for O-Rings



| Mold IDen          | Inch Dimensions |            |             |        | Metric Dimensions (mm) |      |       |
|--------------------|-----------------|------------|-------------|--------|------------------------|------|-------|
|                    | OD              | C/S        | ID          | Volume | OD                     | C/S  | ID    |
| <b>275-2.385</b>   | 2.935           | .275 ±.006 | 2.385 ±.018 | .49635 | 74.55                  | 7.00 | 60.60 |
| <b>103-2.675SS</b> | 2.936           | .105 ±.003 | 2.726 ±.022 | .07701 | 74.55                  | 2.65 | 69.25 |
| <b>187-2.562</b>   | 2.936           | .187 ±.005 | 2.562 ±.020 | .23719 | 74.55                  | 4.75 | 65.05 |
| <b>70-2.800</b>    | 2.940           | .070 ±.003 | 2.800 ±.020 | .03470 | 74.70                  | 1.80 | 71.10 |
| <b>1-148</b>       | 2.943           | .103 ±.003 | 2.737 ±.022 | .07434 | 74.75                  | 2.60 | 69.50 |
| <b>176-2.596</b>   | 2.948           | .176 ±.005 | 2.596 ±.020 | .21186 | 74.90                  | 4.45 | 65.95 |
| <b>139-2.671</b>   | 2.949           | .139 ±.004 | 2.671 ±.020 | .13396 | 74.90                  | 3.55 | 67.85 |
| <b>281-2.391</b>   | 2.953           | .281 ±.006 | 2.391 ±.018 | .52058 | 75.00                  | 7.15 | 60.75 |
| <b>40-2.875</b>    | 2.955           | .040 ±.003 | 2.875 ±.020 | .01151 | 75.05                  | 1.00 | 73.05 |
| <b>59-2.835ES</b>  | 2.957           | .059 ±.003 | 2.839 ±.020 | .02489 | 75.10                  | 1.50 | 72.10 |
| <b>313-2.350</b>   | 2.976           | .313 ±.006 | 2.350 ±.020 | .64372 | 75.60                  | 7.95 | 59.70 |
| <b>176-2.600SS</b> | 2.978           | .178 ±.005 | 2.622 ±.020 | .21890 | 75.65                  | 4.50 | 66.60 |
| <b>260-2.476</b>   | 2.993           | .260 ±.006 | 2.473 ±.020 | .45585 | 76.00                  | 6.60 | 62.80 |
| <b>1-040</b>       | 3.004           | .070 ±.003 | 2.864 ±.020 | .03547 | 76.30                  | 1.80 | 72.75 |
| <b>209-2.587</b>   | 3.005           | .209 ±.005 | 2.587 ±.020 | .30135 | 76.35                  | 5.30 | 65.70 |
| <b>1-149</b>       | 3.006           | .103 ±.003 | 2.800 ±.022 | .07599 | 76.35                  | 2.60 | 71.10 |
| <b>209-2.592</b>   | 3.010           | .209 ±.005 | 2.592 ±.020 | .30189 | 76.45                  | 5.30 | 65.85 |
| <b>90-2.832</b>    | 3.012           | .090 ±.003 | 2.832 ±.022 | .05840 | 76.50                  | 2.30 | 71.95 |
| <b>1-232</b>       | 3.012           | .139 ±.004 | 2.734 ±.024 | .13696 | 76.50                  | 3.55 | 69.45 |
| <b>1-334</b>       | 3.020           | .210 ±.005 | 2.600 ±.020 | .30576 | 76.70                  | 5.35 | 66.05 |
| <b>1-409</b>       | 3.025           | .275 ±.006 | 2.475 ±.020 | .51314 | 76.85                  | 7.00 | 62.85 |
| <b>125-2.750SS</b> | 3.028           | .126 ±.004 | 2.776 ±.024 | .11368 | 76.90                  | 3.20 | 70.50 |
| <b>125-2.756SS</b> | 3.034           | .126 ±.004 | 2.782 ±.024 | .11391 | 77.05                  | 3.20 | 70.65 |
| <b>103-2.830</b>   | 3.036           | .103 ±.003 | 2.830 ±.022 | .07678 | 77.10                  | 2.60 | 71.90 |
| <b>85-2.875</b>    | 3.045           | .085 ±.003 | 2.875 ±.022 | .05277 | 77.35                  | 2.15 | 73.05 |
| <b>319-2.411</b>   | 3.049           | .319 ±.007 | 2.411 ±.020 | .68546 | 77.45                  | 8.10 | 61.25 |
| <b>70-2.921</b>    | 3.061           | .070 ±.003 | 2.921 ±.020 | .03616 | 77.75                  | 1.80 | 74.20 |
| <b>375-2.335NS</b> | 3.063           | .372 ±.007 | 2.319 ±.020 | .91884 | 77.80                  | 9.45 | 58.90 |
| <b>282-2.490VS</b> | 3.065           | .283 ±.006 | 2.499 ±.020 | .54976 | 77.85                  | 7.20 | 63.45 |
| <b>1-150</b>       | 3.068           | .103 ±.003 | 2.862 ±.022 | .07761 | 77.95                  | 2.60 | 72.70 |
| <b>78-2.919</b>    | 3.075           | .078 ±.003 | 2.919 ±.022 | .04499 | 78.10                  | 2.00 | 74.15 |
| <b>176-2.725</b>   | 3.077           | .176 ±.005 | 2.725 ±.020 | .22172 | 78.15                  | 4.45 | 69.20 |
| <b>40-3.000</b>    | 3.080           | .040 ±.003 | 3.000 ±.024 | .01200 | 78.25                  | 1.00 | 76.20 |
| <b>70-2.950ES</b>  | 3.094           | .070 ±.003 | 2.954 ±.020 | .03656 | 78.60                  | 1.80 | 75.05 |
| <b>79-2.943ES</b>  | 3.108           | .079 ±.003 | 2.950 ±.022 | .04664 | 78.95                  | 2.00 | 74.95 |
| <b>375-2.375</b>   | 3.125           | .375 ±.007 | 2.375 ±.020 | .95419 | 79.40                  | 9.55 | 60.35 |
| <b>176-2.725VS</b> | 3.127           | .179 ±.005 | 2.769 ±.020 | .23306 | 79.45                  | 4.55 | 70.35 |
| <b>1-041</b>       | 3.129           | .070 ±.003 | 2.989 ±.024 | .03698 | 79.50                  | 1.80 | 75.90 |
| <b>105-2.921</b>   | 3.131           | .105 ±.003 | 2.921 ±.022 | .08232 | 79.55                  | 2.65 | 74.20 |
| <b>1-233</b>       | 3.137           | .139 ±.004 | 2.859 ±.024 | .14292 | 79.70                  | 3.55 | 72.60 |
| <b>103-2.935ES</b> | 3.138           | .103 ±.003 | 2.932 ±.022 | .07945 | 79.70                  | 2.60 | 74.45 |
| <b>1-335</b>       | 3.145           | .210 ±.005 | 2.725 ±.020 | .31936 | 79.90                  | 5.35 | 69.20 |
| <b>118-2.913</b>   | 3.149           | .118 ±.004 | 2.913 ±.024 | .10413 | 80.00                  | 3.00 | 74.00 |
| <b>1-410</b>       | 3.150           | .275 ±.006 | 2.600 ±.020 | .53647 | 80.00                  | 7.00 | 66.05 |
| <b>148-2.859</b>   | 3.155           | .148 ±.005 | 2.859 ±.020 | .16252 | 80.15                  | 3.75 | 72.60 |



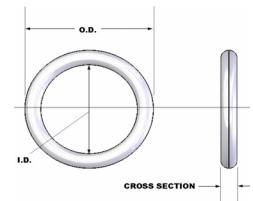
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID    |
| 141-2.874   | 3.156           | .141 ±.004 | 2.874 ±.024 | .14790  | 80.15                  | 3.60  | 73.00 |
| 157-2.835VS | 3.175           | .158 ±.005 | 2.859 ±.020 | .18584  | 80.65                  | 4.00  | 72.60 |
| 394-2.362SS | 3.179           | .397 ±.009 | 2.385 ±.020 | 1.08188 | 80.75                  | 10.10 | 60.60 |
| 750-1.690   | 3.190           | .750 ±.013 | 1.690 ±.015 | 3.38651 | 81.05                  | 19.05 | 42.95 |
| 1-151       | 3.193           | .103 ±.003 | 2.987 ±.024 | .08089  | 81.10                  | 2.60  | 75.85 |
| 176-2.850   | 3.202           | .176 ±.005 | 2.850 ±.020 | .23128  | 81.35                  | 4.45  | 72.40 |
| 30-3.145    | 3.205           | .030 ±.003 | 3.145 ±.024 | .00705  | 81.40                  | .75   | 79.90 |
| 103-3.000   | 3.206           | .103 ±.003 | 3.000 ±.024 | .08123  | 81.45                  | 2.60  | 76.20 |
| 47-3.053SS  | 3.208           | .048 ±.003 | 3.112 ±.024 | .01796  | 81.50                  | 1.20  | 79.05 |
| 44-3.038SS  | 3.212           | .045 ±.003 | 3.122 ±.024 | .01582  | 81.60                  | 1.15  | 79.30 |
| 70-3.085    | 3.225           | .070 ±.003 | 3.085 ±.024 | .03814  | 81.90                  | 1.80  | 78.35 |
| 250-2.725   | 3.225           | .250 ±.006 | 2.725 ±.020 | .45878  | 81.90                  | 6.35  | 69.20 |
| 147-2.935   | 3.229           | .147 ±.005 | 2.935 ±.020 | .16433  | 82.00                  | 3.75  | 74.55 |
| 250-2.750   | 3.250           | .250 ±.006 | 2.750 ±.020 | .46264  | 82.55                  | 6.35  | 69.85 |
| 375-2.500   | 3.250           | .375 ±.007 | 2.500 ±.020 | .99756  | 82.55                  | 9.55  | 63.50 |
| 83-3.083    | 3.253           | .083 ±.003 | 3.087 ±.024 | .05388  | 82.65                  | 2.10  | 78.40 |
| 1-234       | 3.262           | .139 ±.004 | 2.984 ±.024 | .14888  | 82.85                  | 3.55  | 75.80 |
| 152-2.965   | 3.269           | .152 ±.005 | 2.965 ±.020 | .17769  | 83.05                  | 3.85  | 75.30 |
| 1-336       | 3.270           | .210 ±.005 | 2.850 ±.020 | .33297  | 83.05                  | 5.35  | 72.40 |
| 1-411       | 3.275           | .275 ±.006 | 2.725 ±.020 | .55979  | 83.20                  | 7.00  | 69.20 |
| 60-3.156    | 3.276           | .060 ±.003 | 3.156 ±.024 | .02857  | 83.20                  | 1.50  | 80.15 |
| 140-2.997   | 3.277           | .140 ±.004 | 2.997 ±.024 | .15171  | 83.25                  | 3.55  | 76.10 |
| 177-2.925   | 3.279           | .177 ±.005 | 2.925 ±.020 | .23979  | 83.30                  | 4.50  | 74.30 |
| 70-3.114VS  | 3.288           | .071 ±.003 | 3.146 ±.024 | .04001  | 83.50                  | 1.80  | 79.90 |
| 60-3.115SS  | 3.297           | .061 ±.003 | 3.175 ±.024 | .02971  | 83.75                  | 1.55  | 80.65 |
| 140-3.018   | 3.298           | .140 ±.004 | 3.018 ±.024 | .15272  | 83.75                  | 3.55  | 76.65 |
| 268-2.763   | 3.303           | .268 ±.006 | 2.767 ±.020 | .53786  | 83.90                  | 6.80  | 70.30 |
| 40-3.200SS  | 3.310           | .040 ±.003 | 3.230 ±.024 | .01291  | 84.05                  | 1.00  | 82.05 |
| 103-3.109   | 3.315           | .103 ±.003 | 3.109 ±.024 | .08408  | 84.20                  | 2.60  | 78.95 |
| 197-2.921   | 3.315           | .197 ±.005 | 2.921 ±.020 | .29857  | 84.20                  | 5.00  | 74.20 |
| 130-3.062   | 3.322           | .130 ±.004 | 3.062 ±.024 | .13310  | 84.40                  | 3.30  | 77.75 |
| 176-2.975   | 3.327           | .176 ±.005 | 2.975 ±.024 | .24083  | 84.50                  | 4.45  | 75.55 |
| 103-3.147   | 3.353           | .103 ±.003 | 3.147 ±.024 | .08507  | 85.15                  | 2.60  | 79.95 |
| 375-2.608   | 3.358           | .375 ±.007 | 2.608 ±.020 | 1.03504 | 85.30                  | 9.55  | 66.25 |
| 118-3.130   | 3.366           | .118 ±.004 | 3.130 ±.024 | .11159  | 85.50                  | 3.00  | 79.50 |
| 65-3.239    | 3.369           | .065 ±.003 | 3.239 ±.024 | .03444  | 85.55                  | 1.65  | 82.25 |
| 375-2.625   | 3.375           | .375 ±.007 | 2.625 ±.020 | 1.04093 | 85.75                  | 9.55  | 66.70 |
| 1-042       | 3.379           | .070 ±.003 | 3.239 ±.024 | .04001  | 85.85                  | 1.80  | 82.25 |
| 1-235       | 3.387           | .139 ±.004 | 3.109 ±.024 | .15484  | 86.05                  | 3.55  | 78.95 |
| 1-337       | 3.395           | .210 ±.005 | 2.975 ±.024 | .34657  | 86.25                  | 5.35  | 75.55 |
| 224-2.925   | 3.397           | .226 ±.006 | 2.945 ±.020 | .39963  | 86.30                  | 5.75  | 74.80 |
| 1-412       | 3.400           | .275 ±.006 | 2.850 ±.020 | .58312  | 86.35                  | 7.00  | 72.40 |
| 140-3.123   | 3.403           | .140 ±.004 | 3.123 ±.024 | .15780  | 86.45                  | 3.55  | 79.30 |
| 158-3.071ES | 3.404           | .159 ±.005 | 3.086 ±.024 | .20242  | 86.45                  | 4.05  | 78.40 |
| 500-2.375SS | 3.407           | .505 ±.010 | 2.397 ±.020 | 1.82608 | 86.55                  | 12.85 | 60.90 |



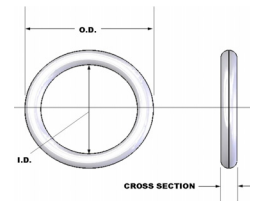
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |       |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|-------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID    |
| 71-3.269    | 3.411           | .071 ±.003 | 3.269 ±.024 | .04154  | 86.65                  | 1.80  | 83.05 |
| 330-2.755   | 3.415           | .330 ±.007 | 2.755 ±.024 | .82894  | 86.75                  | 8.40  | 70.00 |
| 79-3.218VS  | 3.417           | .080 ±.003 | 3.257 ±.024 | .05270  | 86.80                  | 2.05  | 82.75 |
| 312-2.812   | 3.425           | .311 ±.006 | 2.803 ±.024 | .74315  | 87.00                  | 7.90  | 71.20 |
| 103-3.185SS | 3.430           | .104 ±.003 | 3.222 ±.024 | .08876  | 87.10                  | 2.65  | 81.85 |
| 141-3.150   | 3.432           | .141 ±.004 | 3.150 ±.024 | .16144  | 87.15                  | 3.60  | 80.00 |
| 1-152       | 3.443           | .103 ±.003 | 3.237 ±.024 | .08743  | 87.45                  | 2.60  | 82.20 |
| 220-2.975VS | 3.447           | .222 ±.006 | 3.003 ±.024 | .39217  | 87.55                  | 5.65  | 76.30 |
| 176-3.100   | 3.452           | .176 ±.005 | 3.100 ±.024 | .25039  | 87.70                  | 4.45  | 78.75 |
| 176-3.115   | 3.467           | .176 ±.005 | 3.115 ±.024 | .25153  | 88.05                  | 4.45  | 79.10 |
| 87-3.307    | 3.481           | .087 ±.003 | 3.307 ±.024 | .06339  | 88.40                  | 2.20  | 84.00 |
| 40-3.370VS  | 3.482           | .040 ±.003 | 3.402 ±.024 | .01359  | 88.45                  | 1.00  | 86.40 |
| 103-3.290   | 3.496           | .103 ±.003 | 3.290 ±.024 | .08882  | 88.80                  | 2.60  | 83.55 |
| 625-2.250   | 3.500           | .625 ±.012 | 2.250 ±.020 | 2.77101 | 88.90                  | 15.90 | 57.15 |
| 70-3.376NS  | 3.509           | .070 ±.003 | 3.369 ±.024 | .04158  | 89.15                  | 1.80  | 85.55 |
| 1-236       | 3.512           | .139 ±.004 | 3.234 ±.024 | .16080  | 89.20                  | 3.55  | 82.15 |
| 1-338       | 3.520           | .210 ±.005 | 3.100 ±.024 | .36017  | 89.40                  | 5.35  | 78.75 |
| 1-413       | 3.525           | .275 ±.006 | 2.975 ±.024 | .60644  | 89.55                  | 7.00  | 75.55 |
| 140-3.248   | 3.528           | .140 ±.004 | 3.248 ±.024 | .16385  | 89.60                  | 3.55  | 82.50 |
| 80-3.375    | 3.535           | .080 ±.003 | 3.375 ±.024 | .05456  | 89.80                  | 2.05  | 85.75 |
| 312-2.875SS | 3.535           | .315 ±.007 | 2.905 ±.024 | .78835  | 89.80                  | 8.00  | 73.80 |
| 46-3.455    | 3.547           | .046 ±.003 | 3.455 ±.024 | .01828  | 90.10                  | 1.15  | 87.75 |
| 141-3.282   | 3.564           | .141 ±.004 | 3.282 ±.024 | .16791  | 90.55                  | 3.60  | 83.35 |
| 103-3.359   | 3.565           | .103 ±.003 | 3.359 ±.024 | .09062  | 90.55                  | 2.60  | 85.30 |
| 103-3.362   | 3.568           | .103 ±.003 | 3.362 ±.024 | .09070  | 90.65                  | 2.60  | 85.40 |
| 176-3.225   | 3.577           | .176 ±.005 | 3.225 ±.024 | .25994  | 90.85                  | 4.45  | 81.90 |
| 70-3.440    | 3.580           | .070 ±.003 | 3.440 ±.024 | .04244  | 90.95                  | 1.80  | 87.40 |
| 170-3.253   | 3.593           | .170 ±.005 | 3.253 ±.024 | .24409  | 91.25                  | 4.30  | 82.65 |
| 214-3.166   | 3.594           | .214 ±.005 | 3.166 ±.024 | .38193  | 91.30                  | 5.45  | 80.40 |
| 103-3.400   | 3.606           | .103 ±.003 | 3.400 ±.024 | .09170  | 91.60                  | 2.60  | 86.35 |
| 70-3.474    | 3.614           | .070 ±.003 | 3.474 ±.024 | .04285  | 91.80                  | 1.80  | 88.25 |
| 103-3.410ES | 3.621           | .103 ±.003 | 3.415 ±.024 | .09209  | 91.95                  | 2.60  | 86.75 |
| 375-2.875   | 3.625           | .375 ±.007 | 2.875 ±.024 | 1.12768 | 92.10                  | 9.55  | 73.05 |
| 1-043       | 3.629           | .070 ±.003 | 3.489 ±.024 | .04303  | 92.20                  | 1.80  | 88.60 |
| 185-3.260   | 3.630           | .185 ±.005 | 3.260 ±.024 | .29092  | 92.20                  | 4.70  | 82.80 |
| 1-237       | 3.637           | .139 ±.004 | 3.359 ±.024 | .16676  | 92.40                  | 3.55  | 85.30 |
| 111-3.422   | 3.644           | .111 ±.004 | 3.422 ±.024 | .10741  | 92.55                  | 2.80  | 86.90 |
| 1-339       | 3.645           | .210 ±.005 | 3.225 ±.024 | .37377  | 92.60                  | 5.35  | 81.90 |
| 1-414       | 3.650           | .275 ±.006 | 3.100 ±.024 | .62977  | 92.70                  | 7.00  | 78.75 |
| 140-3.374   | 3.654           | .140 ±.004 | 3.374 ±.024 | .16994  | 92.80                  | 3.55  | 85.70 |
| 80-3.500    | 3.660           | .080 ±.003 | 3.500 ±.024 | .05653  | 92.95                  | 2.05  | 88.90 |
| 71-3.523    | 3.665           | .071 ±.003 | 3.523 ±.024 | .04470  | 93.10                  | 1.80  | 89.50 |
| 80-3.483VS  | 3.671           | .081 ±.003 | 3.509 ±.009 | .05812  | 93.25                  | 2.05  | 89.15 |
| 84-3.506    | 3.674           | .084 ±.003 | 3.506 ±.024 | .06250  | 93.30                  | 2.15  | 89.05 |
| 103-3.460ES | 3.675           | .103 ±.003 | 3.469 ±.024 | .09350  | 93.35                  | 2.60  | 88.10 |



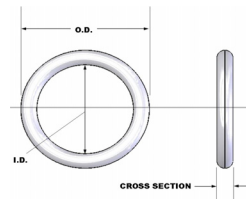
# Engineers Guide for O-Rings



| Mold IDen          | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |       |
|--------------------|-----------------|------------|-------------|---------|------------------------|-------|-------|
|                    | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID    |
| <b>212-3.255</b>   | 3.679           | .212 ±.005 | 3.255 ±.024 | .38447  | 93.45                  | 5.40  | 82.70 |
| <b>375-2.930</b>   | 3.680           | .375 ±.007 | 2.930 ±.024 | 1.14676 | 93.45                  | 9.55  | 74.40 |
| <b>187-3.312</b>   | 3.686           | .187 ±.005 | 3.312 ±.024 | .30190  | 93.60                  | 4.75  | 84.10 |
| <b>1-153</b>       | 3.693           | .103 ±.003 | 3.487 ±.024 | .09397  | 93.80                  | 2.60  | 88.55 |
| <b>70-3.562</b>    | 3.702           | .070 ±.003 | 3.562 ±.024 | .04391  | 94.05                  | 1.80  | 90.45 |
| <b>176-3.350</b>   | 3.702           | .176 ±.005 | 3.350 ±.024 | .26949  | 94.05                  | 4.45  | 85.10 |
| <b>370-2.982</b>   | 3.722           | .370 ±.007 | 2.982 ±.024 | 1.13226 | 94.55                  | 9.40  | 75.75 |
| <b>104-3.520</b>   | 3.728           | .104 ±.003 | 3.520 ±.024 | .09672  | 94.70                  | 2.65  | 89.40 |
| <b>437-2.875</b>   | 3.749           | .437 ±.009 | 2.875 ±.024 | 1.56060 | 95.20                  | 11.10 | 73.05 |
| <b>75-3.600</b>    | 3.750           | .075 ±.003 | 3.600 ±.024 | .05101  | 95.25                  | 1.90  | 91.45 |
| <b>250-3.250</b>   | 3.750           | .250 ±.006 | 3.250 ±.024 | .53974  | 95.25                  | 6.35  | 82.55 |
| <b>152-3.420VS</b> | 3.755           | .153 ±.005 | 3.449 ±.024 | .20805  | 95.40                  | 3.90  | 87.60 |
| <b>50-3.670</b>    | 3.761           | .050 ±.003 | 3.661 ±.024 | .02289  | 95.55                  | 1.25  | 93.00 |
| <b>58-3.645</b>    | 3.761           | .058 ±.003 | 3.645 ±.024 | .03074  | 95.55                  | 1.45  | 92.60 |
| <b>1-238</b>       | 3.762           | .139 ±.004 | 3.484 ±.024 | .17272  | 95.55                  | 3.55  | 88.50 |
| <b>122-3.520</b>   | 3.764           | .122 ±.004 | 3.520 ±.024 | .13375  | 95.60                  | 3.10  | 89.40 |
| <b>1-340</b>       | 3.770           | .210 ±.005 | 3.350 ±.024 | .38737  | 95.75                  | 5.35  | 85.10 |
| <b>1-415</b>       | 3.775           | .275 ±.006 | 3.225 ±.024 | .65309  | 95.90                  | 7.00  | 81.90 |
| <b>140-3.500</b>   | 3.780           | .140 ±.004 | 3.500 ±.024 | .17603  | 96.00                  | 3.55  | 88.90 |
| <b>211-3.366</b>   | 3.788           | .211 ±.005 | 3.366 ±.024 | .39294  | 96.20                  | 5.35  | 85.50 |
| <b>310-3.136SS</b> | 3.791           | .313 ±.006 | 3.165 ±.024 | .84073  | 96.30                  | 7.95  | 80.40 |
| <b>203-3.375</b>   | 3.792           | .204 ±.005 | 3.384 ±.024 | .36843  | 96.30                  | 5.20  | 85.95 |
| <b>330-3.137</b>   | 3.797           | .330 ±.007 | 3.137 ±.024 | .93158  | 96.45                  | 8.40  | 79.70 |
| <b>50-3.670SS</b>  | 3.804           | .050 ±.003 | 3.704 ±.024 | .02316  | 96.60                  | 1.25  | 94.10 |
| <b>125-3.562</b>   | 3.812           | .125 ±.004 | 3.562 ±.024 | .14215  | 96.80                  | 3.20  | 90.45 |
| <b>156-3.500</b>   | 3.812           | .156 ±.005 | 3.500 ±.024 | .21953  | 96.80                  | 3.95  | 88.90 |
| <b>103-3.612</b>   | 3.818           | .103 ±.003 | 3.612 ±.024 | .09725  | 97.00                  | 2.60  | 91.75 |
| <b>176-3.475</b>   | 3.827           | .176 ±.005 | 3.475 ±.024 | .27905  | 97.20                  | 4.45  | 88.25 |
| <b>90-3.661</b>    | 3.841           | .090 ±.003 | 3.661 ±.024 | .07497  | 97.55                  | 2.30  | 93.00 |
| <b>125-3.543SS</b> | 3.851           | .127 ±.004 | 3.597 ±.024 | .14820  | 97.80                  | 3.25  | 91.35 |
| <b>275-3.252SS</b> | 3.857           | .279 ±.006 | 3.299 ±.024 | .68721  | 97.95                  | 7.10  | 83.80 |
| <b>179-3.522</b>   | 3.866           | .178 ±.005 | 3.510 ±.024 | .28832  | 98.20                  | 4.50  | 89.15 |
| <b>1-044</b>       | 3.879           | .070 ±.003 | 3.739 ±.027 | .04605  | 98.55                  | 1.80  | 94.95 |
| <b>1-239</b>       | 3.887           | .139 ±.004 | 3.609 ±.028 | .17868  | 98.75                  | 3.55  | 91.65 |
| <b>125-3.640</b>   | 3.890           | .125 ±.004 | 3.640 ±.028 | .14515  | 98.80                  | 3.20  | 92.45 |
| <b>1-341</b>       | 3.895           | .210 ±.005 | 3.475 ±.024 | .40097  | 98.95                  | 5.35  | 88.25 |
| <b>1-416</b>       | 3.900           | .275 ±.006 | 3.350 ±.024 | .67641  | 99.05                  | 7.00  | 85.10 |
| <b>140-3.625</b>   | 3.905           | .140 ±.004 | 3.625 ±.028 | .18208  | 99.20                  | 3.55  | 92.10 |
| <b>71-3.776</b>    | 3.918           | .071 ±.003 | 3.776 ±.027 | .04785  | 99.50                  | 1.80  | 95.90 |
| <b>95-3.744</b>    | 3.934           | .095 ±.003 | 3.744 ±.028 | .08549  | 99.90                  | 2.40  | 95.10 |
| <b>1-154</b>       | 3.943           | .103 ±.003 | 3.737 ±.028 | .10052  | 100.15                 | 2.60  | 94.90 |
| <b>147-3.656</b>   | 3.950           | .147 ±.005 | 3.656 ±.028 | .20277  | 100.35                 | 3.75  | 92.85 |
| <b>176-3.600</b>   | 3.952           | .176 ±.005 | 3.600 ±.028 | .28860  | 100.40                 | 4.45  | 91.45 |
| <b>312-3.300SS</b> | 3.961           | .315 ±.006 | 3.331 ±.024 | .89264  | 100.60                 | 8.00  | 84.60 |
| <b>70-3.833ES</b>  | 3.985           | .070 ±.003 | 3.845 ±.028 | .04733  | 101.20                 | 1.80  | 97.65 |



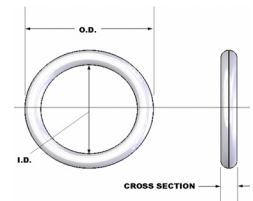
# Engineers Guide for O-Rings



| Mold IDen          | Inch Dimensions |            |             |         | Metric Dimensions (mm) |      |        |
|--------------------|-----------------|------------|-------------|---------|------------------------|------|--------|
|                    | OD              | C/S        | ID          | Volume  | OD                     | C/S  | ID     |
| <b>230-3.475VS</b> | 3.987           | .233 ±.006 | 3.521 ±.024 | .50286  | 101.25                 | 5.90 | 89.45  |
| <b>70-3.840ES</b>  | 3.991           | .070 ±.003 | 3.851 ±.027 | .04741  | 101.35                 | 1.80 | 97.80  |
| <b>70-3.860</b>    | 4.000           | .070 ±.003 | 3.860 ±.027 | .04751  | 101.60                 | 1.80 | 98.05  |
| <b>1-240</b>       | 4.012           | .139 ±.004 | 3.734 ±.028 | .18464  | 101.90                 | 3.55 | 94.85  |
| <b>1-342</b>       | 4.020           | .210 ±.005 | 3.600 ±.028 | .41458  | 102.10                 | 5.35 | 91.45  |
| <b>1-417</b>       | 4.025           | .275 ±.006 | 3.475 ±.024 | .69974  | 102.25                 | 7.00 | 88.25  |
| <b>150-3.734</b>   | 4.034           | .150 ±.005 | 3.734 ±.028 | .21563  | 102.45                 | 3.80 | 94.85  |
| <b>140-3.757</b>   | 4.037           | .140 ±.004 | 3.757 ±.028 | .18846  | 102.55                 | 3.55 | 95.45  |
| <b>103-3.837</b>   | 4.043           | .103 ±.003 | 3.837 ±.028 | .10314  | 102.70                 | 2.60 | 97.45  |
| <b>118-3.819</b>   | 4.055           | .118 ±.004 | 3.819 ±.028 | .13526  | 103.00                 | 3.00 | 97.00  |
| <b>212-3.635</b>   | 4.059           | .212 ±.005 | 3.635 ±.028 | .42661  | 103.10                 | 5.40 | 92.35  |
| <b>210-3.640</b>   | 4.060           | .210 ±.005 | 3.640 ±.028 | .41893  | 103.10                 | 5.35 | 92.45  |
| <b>212-3.641</b>   | 4.065           | .212 ±.005 | 3.641 ±.028 | .42728  | 103.25                 | 5.40 | 92.50  |
| <b>248-3.575</b>   | 4.071           | .248 ±.006 | 3.575 ±.024 | .58016  | 103.40                 | 6.30 | 90.80  |
| <b>300-3.475</b>   | 4.075           | .300 ±.006 | 3.475 ±.024 | .83830  | 103.50                 | 7.60 | 88.25  |
| <b>70-3.937</b>    | 4.077           | .070 ±.003 | 3.937 ±.027 | .04845  | 103.55                 | 1.80 | 100.00 |
| <b>176-3.725</b>   | 4.077           | .176 ±.005 | 3.725 ±.028 | .29815  | 103.55                 | 4.45 | 94.60  |
| <b>125-3.750SS</b> | 4.078           | .127 ±.004 | 3.824 ±.028 | .15724  | 103.60                 | 3.25 | 97.15  |
| <b>103-3.875</b>   | 4.097           | .103 ±.003 | 3.891 ±.028 | .10455  | 104.05                 | 2.60 | 98.85  |
| <b>375-3.325SS</b> | 4.100           | .377 ±.007 | 3.346 ±.024 | 1.30562 | 104.15                 | 9.60 | 85.00  |
| <b>210-3.640SS</b> | 4.102           | .212 ±.005 | 3.678 ±.028 | .43138  | 104.20                 | 5.40 | 93.40  |
| <b>158-3.780ES</b> | 4.117           | .159 ±.005 | 3.799 ±.028 | .24689  | 104.55                 | 4.05 | 96.50  |
| <b>1-045</b>       | 4.129           | .070 ±.003 | 3.989 ±.027 | .04907  | 104.90                 | 1.80 | 101.30 |
| <b>256-3.563SS</b> | 4.134           | .260 ±.006 | 3.614 ±.028 | .64617  | 105.00                 | 6.60 | 91.80  |
| <b>1-241</b>       | 4.137           | .139 ±.004 | 3.859 ±.028 | .19060  | 105.10                 | 3.55 | 98.00  |
| <b>1-343</b>       | 4.145           | .210 ±.005 | 3.725 ±.028 | .42818  | 105.30                 | 5.35 | 94.60  |
| <b>103-3.862</b>   | 4.148           | .105 ±.003 | 3.938 ±.028 | .10998  | 105.35                 | 2.65 | 100.05 |
| <b>1-418</b>       | 4.150           | .275 ±.006 | 3.600 ±.028 | .72306  | 105.40                 | 7.00 | 91.45  |
| <b>140-3.876</b>   | 4.156           | .140 ±.004 | 3.876 ±.028 | .19422  | 105.55                 | 3.55 | 98.45  |
| <b>150-3.859</b>   | 4.159           | .150 ±.005 | 3.859 ±.028 | .22257  | 105.65                 | 3.80 | 98.00  |
| <b>224-3.724</b>   | 4.172           | .224 ±.006 | 3.724 ±.028 | .48878  | 105.95                 | 5.70 | 94.60  |
| <b>139-3.910</b>   | 4.188           | .139 ±.004 | 3.910 ±.028 | .19303  | 106.40                 | 3.55 | 99.30  |
| <b>1-155</b>       | 4.193           | .103 ±.003 | 3.987 ±.028 | .10706  | 106.50                 | 2.60 | 101.25 |
| <b>176-3.850</b>   | 4.202           | .176 ±.005 | 3.850 ±.028 | .30771  | 106.75                 | 4.45 | 97.80  |
| <b>104-4.028</b>   | 4.236           | .104 ±.003 | 4.028 ±.028 | .11027  | 107.60                 | 2.65 | 102.30 |
| <b>40-4.140VS</b>  | 4.259           | .040 ±.003 | 4.179 ±.027 | .01666  | 108.20                 | 1.00 | 106.15 |
| <b>1-242</b>       | 4.262           | .139 ±.004 | 3.984 ±.028 | .19655  | 108.25                 | 3.55 | 101.20 |
| <b>1-344</b>       | 4.270           | .210 ±.005 | 3.850 ±.028 | .44178  | 108.45                 | 5.35 | 97.80  |
| <b>1-419</b>       | 4.275           | .275 ±.006 | 3.725 ±.028 | .74639  | 108.60                 | 7.00 | 94.60  |
| <b>140-4.008</b>   | 4.288           | .140 ±.004 | 4.008 ±.028 | .20060  | 108.90                 | 3.55 | 101.80 |
| <b>70-4.107SS</b>  | 4.289           | .071 ±.003 | 4.147 ±.027 | .05246  | 108.95                 | 1.80 | 105.35 |
| <b>156-3.984</b>   | 4.296           | .156 ±.005 | 3.984 ±.028 | .24859  | 109.10                 | 3.95 | 101.20 |
| <b>103-4.093</b>   | 4.299           | .103 ±.003 | 4.093 ±.028 | .10984  | 109.20                 | 2.60 | 103.95 |
| <b>70-4.180NS</b>  | 4.312           | .070 ±.003 | 4.172 ±.027 | .05129  | 109.55                 | 1.80 | 105.95 |
| <b>139-4.046</b>   | 4.314           | .139 ±.004 | 4.036 ±.028 | .19903  | 109.60                 | 3.55 | 102.50 |



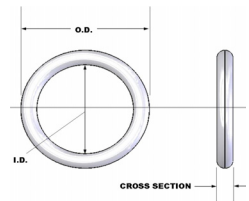
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 103-4.109   | 4.315           | .103 ±.003 | 4.109 ±.028 | .11026  | 109.60                 | 2.60  | 104.35 |
| 139-4.020SS | 4.317           | .140 ±.004 | 4.037 ±.028 | .20200  | 109.65                 | 3.55  | 102.55 |
| 176-3.975   | 4.327           | .176 ±.005 | 3.975 ±.028 | .31726  | 109.90                 | 4.45  | 100.95 |
| 103-4.150   | 4.356           | .103 ±.003 | 4.150 ±.028 | .11133  | 110.65                 | 2.60  | 105.40 |
| 125-4.109   | 4.359           | .125 ±.004 | 4.109 ±.028 | .16323  | 110.70                 | 3.20  | 104.35 |
| 118-4.134   | 4.370           | .118 ±.004 | 4.134 ±.028 | .14608  | 111.00                 | 3.00  | 105.00 |
| 375-3.622   | 4.372           | .375 ±.007 | 3.622 ±.024 | 1.38687 | 111.05                 | 9.55  | 92.00  |
| 103-4.169   | 4.375           | .103 ±.003 | 4.169 ±.028 | .11183  | 111.15                 | 2.60  | 105.90 |
| 1-046       | 4.379           | .070 ±.003 | 4.239 ±.030 | .05210  | 111.25                 | 1.80  | 107.65 |
| 103-4.175   | 4.381           | .103 ±.003 | 4.175 ±.028 | .11198  | 111.30                 | 2.60  | 106.05 |
| 1-243       | 4.387           | .139 ±.004 | 4.109 ±.028 | .20251  | 111.45                 | 3.55  | 104.35 |
| 83-4.226    | 4.392           | .083 ±.003 | 4.226 ±.028 | .07324  | 111.55                 | 2.10  | 107.35 |
| 1-345       | 4.395           | .210 ±.005 | 3.975 ±.028 | .45538  | 111.65                 | 5.35  | 100.95 |
| 1-420       | 4.400           | .275 ±.006 | 3.850 ±.028 | .76971  | 111.75                 | 7.00  | 97.80  |
| 281-3.844   | 4.406           | .281 ±.006 | 3.844 ±.028 | .80367  | 111.90                 | 7.15  | 97.65  |
| 140-4.127   | 4.407           | .140 ±.004 | 4.127 ±.028 | .20636  | 111.95                 | 3.55  | 104.85 |
| 103-4.204ES | 4.421           | .103 ±.003 | 4.215 ±.028 | .11303  | 112.30                 | 2.60  | 107.05 |
| 47-4.343    | 4.437           | .047 ±.003 | 4.343 ±.030 | .02393  | 112.70                 | 1.20  | 110.30 |
| 70-4.300    | 4.440           | .070 ±.003 | 4.300 ±.030 | .05283  | 112.80                 | 1.80  | 109.20 |
| 1-156       | 4.443           | .103 ±.003 | 4.237 ±.030 | .11361  | 112.85                 | 2.60  | 107.60 |
| 155-4.139   | 4.449           | .155 ±.005 | 4.139 ±.028 | .25455  | 113.00                 | 3.95  | 105.15 |
| 176-4.100   | 4.452           | .176 ±.005 | 4.100 ±.028 | .32682  | 113.10                 | 4.45  | 104.15 |
| 103-4.256   | 4.462           | .103 ±.003 | 4.256 ±.030 | .11410  | 113.35                 | 2.60  | 108.10 |
| 44-4.390    | 4.478           | .044 ±.003 | 4.390 ±.030 | .02118  | 113.75                 | 1.10  | 111.50 |
| 186-4.095SS | 4.479           | .186 ±.005 | 4.107 ±.028 | .36646  | 113.75                 | 4.70  | 104.30 |
| 500-3.500   | 4.500           | .500 ±.010 | 3.500 ±.024 | 2.46740 | 114.30                 | 12.70 | 88.90  |
| 140-4.125SS | 4.502           | .143 ±.004 | 4.216 ±.028 | .21994  | 114.35                 | 3.65  | 107.10 |
| 78-4.266SS  | 4.506           | .079 ±.003 | 4.348 ±.030 | .06817  | 114.45                 | 2.00  | 110.45 |
| 1-244       | 4.512           | .139 ±.004 | 4.234 ±.030 | .20847  | 114.60                 | 3.55  | 107.55 |
| 103-4.300ES | 4.517           | .103 ±.003 | 4.311 ±.030 | .11554  | 114.75                 | 2.60  | 109.50 |
| 1-346       | 4.520           | .210 ±.005 | 4.100 ±.028 | .46898  | 114.80                 | 5.35  | 104.15 |
| 1-421       | 4.525           | .275 ±.006 | 3.975 ±.028 | .79304  | 114.95                 | 7.00  | 100.95 |
| 111-4.322   | 4.544           | .111 ±.004 | 4.322 ±.030 | .13477  | 115.40                 | 2.80  | 109.80 |
| 224-4.098   | 4.546           | .224 ±.006 | 4.098 ±.028 | .53508  | 115.45                 | 5.70  | 104.10 |
| 140-4.274   | 4.554           | .140 ±.004 | 4.274 ±.030 | .21347  | 115.65                 | 3.55  | 108.55 |
| 103-4.350   | 4.556           | .103 ±.003 | 4.350 ±.030 | .11656  | 115.70                 | 2.60  | 110.50 |
| 103-4.359   | 4.565           | .103 ±.003 | 4.359 ±.030 | .11680  | 115.95                 | 2.60  | 110.70 |
| 30-4.523    | 4.567           | .030 ±.003 | 4.507 ±.030 | .01008  | 116.00                 | .75   | 114.50 |
| 176-4.225   | 4.577           | .176 ±.005 | 4.225 ±.030 | .33637  | 116.25                 | 4.45  | 107.30 |
| 60-4.500SS  | 4.587           | .060 ±.003 | 4.467 ±.030 | .04021  | 116.50                 | 1.50  | 113.45 |
| 139-4.300ES | 4.589           | .139 ±.004 | 4.311 ±.030 | .21214  | 116.55                 | 3.55  | 109.50 |
| 150-4.295   | 4.595           | .150 ±.005 | 4.295 ±.030 | .24677  | 116.70                 | 3.80  | 109.10 |
| 71-4.409VS  | 4.599           | .072 ±.003 | 4.455 ±.030 | .05790  | 116.80                 | 1.85  | 113.15 |
| 103-4.397   | 4.603           | .103 ±.003 | 4.397 ±.030 | .11779  | 116.90                 | 2.60  | 111.70 |
| 1-047       | 4.629           | .070 ±.003 | 4.489 ±.030 | .05512  | 117.60                 | 1.80  | 114.00 |



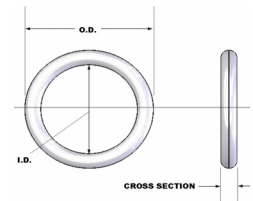
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 1-245       | 4.637           | .139 ±.004 | 4.359 ±.030 | .21443  | 117.80                 | 3.55  | 110.70 |
| 1-347       | 4.645           | .210 ±.005 | 4.225 ±.030 | .48258  | 118.00                 | 5.35  | 107.30 |
| 1-422       | 4.650           | .275 ±.006 | 4.100 ±.028 | .81636  | 118.10                 | 7.00  | 104.15 |
| 400-3.850   | 4.650           | .400 ±.009 | 3.850 ±.028 | 1.67783 | 118.10                 | 10.15 | 97.80  |
| 140-4.379   | 4.659           | .140 ±.004 | 4.379 ±.030 | .21854  | 118.35                 | 3.55  | 111.25 |
| 500-3.675   | 4.675           | .500 ±.010 | 3.675 ±.024 | 2.57535 | 118.75                 | 12.70 | 93.35  |
| 1-157       | 4.693           | .103 ±.003 | 4.487 ±.030 | .12015  | 119.20                 | 2.60  | 113.95 |
| 70-4.562    | 4.702           | .070 ±.003 | 4.562 ±.030 | .05600  | 119.45                 | 1.80  | 115.90 |
| 176-4.350   | 4.702           | .176 ±.005 | 4.350 ±.030 | .34592  | 119.45                 | 4.45  | 110.50 |
| 103-4.487ES | 4.704           | .103 ±.003 | 4.498 ±.030 | .12044  | 119.50                 | 2.60  | 114.25 |
| 103-4.507   | 4.713           | .103 ±.003 | 4.507 ±.030 | .12067  | 119.70                 | 2.60  | 114.50 |
| 210-4.304   | 4.724           | .210 ±.005 | 4.304 ±.030 | .49118  | 120.00                 | 5.35  | 109.30 |
| 375-4.006   | 4.756           | .375 ±.007 | 4.006 ±.028 | 1.52011 | 120.80                 | 9.55  | 101.75 |
| 215-4.331   | 4.761           | .215 ±.005 | 4.331 ±.030 | .51850  | 120.95                 | 5.45  | 110.00 |
| 1-246       | 4.762           | .139 ±.004 | 4.484 ±.030 | .22039  | 120.95                 | 3.55  | 113.90 |
| 1-348       | 4.770           | .210 ±.005 | 4.350 ±.030 | .49618  | 121.15                 | 5.35  | 110.50 |
| 1-423       | 4.775           | .275 ±.006 | 4.225 ±.030 | .83969  | 121.30                 | 7.00  | 107.30 |
| 140-4.508   | 4.788           | .140 ±.004 | 4.508 ±.030 | .22478  | 121.60                 | 3.55  | 114.50 |
| 70-4.672    | 4.812           | .070 ±.003 | 4.672 ±.030 | .05733  | 122.25                 | 1.80  | 118.65 |
| 103-4.612   | 4.818           | .103 ±.003 | 4.612 ±.030 | .12342  | 122.40                 | 2.60  | 117.15 |
| 176-4.475   | 4.827           | .176 ±.005 | 4.475 ±.030 | .35548  | 122.60                 | 4.45  | 113.65 |
| 125-4.600   | 4.850           | .125 ±.004 | 4.600 ±.030 | .18216  | 123.20                 | 3.20  | 116.85 |
| 181-4.488   | 4.850           | .181 ±.005 | 4.488 ±.030 | .37742  | 123.20                 | 4.60  | 114.00 |
| 103-4.609SS | 4.862           | .104 ±.003 | 4.654 ±.030 | .12698  | 123.50                 | 2.65  | 118.20 |
| 250-4.375   | 4.875           | .250 ±.006 | 4.375 ±.030 | .71323  | 123.85                 | 6.35  | 111.15 |
| 1-048       | 4.879           | .070 ±.003 | 4.739 ±.030 | .05814  | 123.95                 | 1.80  | 120.35 |
| 1-247       | 4.887           | .139 ±.004 | 4.609 ±.030 | .22635  | 124.15                 | 3.55  | 117.05 |
| 1-349       | 4.895           | .210 ±.005 | 4.475 ±.030 | .50979  | 124.35                 | 5.35  | 113.65 |
| 1-424       | 4.900           | .275 ±.006 | 4.350 ±.030 | .86301  | 124.45                 | 7.00  | 110.50 |
| 140-4.630   | 4.910           | .140 ±.004 | 4.630 ±.030 | .23068  | 124.70                 | 3.55  | 117.60 |
| 220-4.475   | 4.915           | .220 ±.006 | 4.475 ±.033 | .56069  | 124.85                 | 5.60  | 113.65 |
| 71-4.784    | 4.926           | .071 ±.003 | 4.784 ±.030 | .06039  | 125.10                 | 1.80  | 121.50 |
| 141-4.654   | 4.936           | .141 ±.004 | 4.654 ±.030 | .23522  | 125.35                 | 3.60  | 118.20 |
| 500-3.937   | 4.937           | .500 ±.010 | 3.937 ±.028 | 2.73696 | 125.40                 | 12.70 | 100.00 |
| 1-158       | 4.943           | .103 ±.003 | 4.737 ±.030 | .12670  | 125.55                 | 2.60  | 120.30 |
| 241-4.475   | 4.957           | .241 ±.006 | 4.475 ±.033 | .67585  | 125.90                 | 6.10  | 113.65 |
| 117-4.750   | 4.968           | .117 ±.004 | 4.734 ±.030 | .16385  | 126.20                 | 2.95  | 120.25 |
| 188-4.600   | 4.976           | .188 ±.005 | 4.600 ±.030 | .41755  | 126.40                 | 4.80  | 116.85 |
| 375-4.250   | 4.992           | .374 ±.007 | 4.244 ±.030 | 1.59381 | 126.80                 | 9.50  | 107.80 |
| 70-4.864    | 5.004           | .070 ±.003 | 4.864 ±.030 | .05965  | 127.10                 | 1.80  | 123.55 |
| 1-248       | 5.012           | .139 ±.004 | 4.734 ±.030 | .23231  | 127.30                 | 3.55  | 120.25 |
| 1-350       | 5.020           | .210 ±.005 | 4.600 ±.030 | .52339  | 127.50                 | 5.35  | 116.85 |
| 1-425       | 5.025           | .275 ±.006 | 4.475 ±.033 | .88634  | 127.65                 | 7.00  | 113.65 |
| 70-4.890    | 5.030           | .070 ±.003 | 4.890 ±.030 | .05997  | 127.75                 | 1.80  | 124.20 |
| 140-4.755   | 5.035           | .140 ±.004 | 4.755 ±.030 | .23673  | 127.90                 | 3.55  | 120.80 |



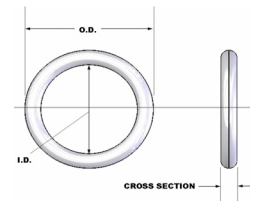
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |      |        |
|-------------|-----------------|------------|-------------|---------|------------------------|------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S  | ID     |
| 375-4.250VS | 5.052           | .379 ±.007 | 4.294 ±.030 | 1.65620 | 128.30                 | 9.65 | 109.05 |
| 103-4.859   | 5.065           | .103 ±.003 | 4.859 ±.030 | .12989  | 128.65                 | 2.60 | 123.40 |
| 212-4.645   | 5.069           | .212 ±.005 | 4.645 ±.030 | .53862  | 128.75                 | 5.40 | 118.00 |
| 176-4.725   | 5.077           | .176 ±.005 | 4.725 ±.030 | .37458  | 128.95                 | 4.45 | 120.00 |
| 103-4.886ES | 5.104           | .103 ±.003 | 4.898 ±.030 | .13091  | 129.65                 | 2.60 | 124.40 |
| 1-049       | 5.129           | .070 ±.003 | 4.989 ±.037 | .06116  | 130.30                 | 1.80 | 126.70 |
| 103-4.930   | 5.136           | .103 ±.003 | 4.930 ±.030 | .13175  | 130.45                 | 2.60 | 125.20 |
| 1-249       | 5.137           | .139 ±.004 | 4.859 ±.035 | .23827  | 130.50                 | 3.55 | 123.40 |
| 1-351       | 5.145           | .210 ±.005 | 4.725 ±.030 | .53699  | 130.70                 | 5.35 | 120.00 |
| 1-426       | 5.150           | .275 ±.006 | 4.600 ±.033 | .90966  | 130.80                 | 7.00 | 116.85 |
| 140-4.881   | 5.161           | .140 ±.004 | 4.881 ±.035 | .24282  | 131.10                 | 3.55 | 124.00 |
| 159-4.850   | 5.168           | .159 ±.005 | 4.850 ±.030 | .31245  | 131.25                 | 4.05 | 123.20 |
| 219-4.750   | 5.188           | .219 ±.006 | 4.750 ±.033 | .58803  | 131.80                 | 5.55 | 120.65 |
| 1-159       | 5.193           | .103 ±.003 | 4.987 ±.035 | .13324  | 131.90                 | 2.60 | 126.65 |
| 212-4.774   | 5.198           | .212 ±.005 | 4.774 ±.030 | .55292  | 132.05                 | 5.40 | 121.25 |
| 375-4.438ES | 5.201           | .376 ±.007 | 4.449 ±.030 | 1.68311 | 132.10                 | 9.55 | 113.00 |
| 176-4.850   | 5.202           | .176 ±.005 | 4.850 ±.030 | .38414  | 132.15                 | 4.45 | 123.20 |
| 141-4.928   | 5.210           | .141 ±.004 | 4.928 ±.035 | .24866  | 132.35                 | 3.60 | 125.15 |
| 139-4.910ES | 5.217           | .140 ±.004 | 4.937 ±.035 | .24553  | 132.50                 | 3.55 | 125.40 |
| 70-5.114    | 5.254           | .070 ±.003 | 5.114 ±.037 | .06268  | 133.45                 | 1.80 | 129.90 |
| 1-250       | 5.262           | .139 ±.004 | 4.984 ±.035 | .24423  | 133.65                 | 3.55 | 126.60 |
| 1-352       | 5.270           | .210 ±.005 | 4.850 ±.030 | .55059  | 133.85                 | 5.35 | 123.20 |
| 1-427       | 5.275           | .275 ±.006 | 4.725 ±.033 | .93299  | 134.00                 | 7.00 | 120.00 |
| 147-4.984   | 5.278           | .147 ±.005 | 4.984 ±.037 | .27358  | 134.05                 | 3.75 | 126.60 |
| 140-5.006   | 5.286           | .140 ±.004 | 5.006 ±.035 | .24887  | 134.25                 | 3.55 | 127.15 |
| 50-5.163VS  | 5.312           | .050 ±.003 | 5.212 ±.037 | .03246  | 134.95                 | 1.25 | 132.40 |
| 103-5.106   | 5.312           | .103 ±.003 | 5.106 ±.035 | .13635  | 134.95                 | 2.60 | 129.70 |
| 197-4.921   | 5.315           | .197 ±.005 | 4.921 ±.030 | .49009  | 135.00                 | 5.00 | 125.00 |
| 103-5.117   | 5.323           | .103 ±.003 | 5.117 ±.035 | .13664  | 135.20                 | 2.60 | 129.95 |
| 278-4.769   | 5.325           | .278 ±.006 | 4.769 ±.033 | .96242  | 135.25                 | 7.05 | 121.15 |
| 147-4.984SS | 5.327           | .148 ±.005 | 5.031 ±.037 | .27990  | 135.30                 | 3.75 | 127.80 |
| 241-4.850   | 5.332           | .241 ±.006 | 4.850 ±.033 | .72959  | 135.45                 | 6.10 | 123.20 |
| 103-5.140ES | 5.359           | .103 ±.003 | 5.153 ±.035 | .13758  | 136.10                 | 2.60 | 130.90 |
| 62-5.250    | 5.374           | .062 ±.003 | 5.250 ±.037 | .05038  | 136.50                 | 1.55 | 133.35 |
| 1-050       | 5.379           | .070 ±.003 | 5.239 ±.037 | .06419  | 136.65                 | 1.80 | 133.05 |
| 312-4.700ES | 5.386           | .316 ±.007 | 4.754 ±.030 | 1.24917 | 136.80                 | 8.05 | 120.75 |
| 1-251       | 5.387           | .139 ±.004 | 5.109 ±.035 | .25019  | 136.85                 | 3.55 | 129.75 |
| 1-353       | 5.395           | .210 ±.005 | 4.975 ±.037 | .56419  | 137.05                 | 5.35 | 126.35 |
| 168-5.005VS | 5.397           | .170 ±.005 | 5.057 ±.037 | .37273  | 137.10                 | 4.30 | 128.45 |
| 1-428       | 5.400           | .275 ±.006 | 4.850 ±.033 | .95631  | 137.15                 | 7.00 | 123.20 |
| 315-4.776   | 5.406           | .315 ±.007 | 4.776 ±.030 | 1.24642 | 137.30                 | 8.00 | 121.30 |
| 71-5.288    | 5.430           | .071 ±.003 | 5.288 ±.030 | .06666  | 137.90                 | 1.80 | 134.30 |
| 1-160       | 5.443           | .103 ±.003 | 5.237 ±.035 | .13978  | 138.25                 | 2.60 | 133.00 |
| 50-5.302VS  | 5.467           | .051 ±.003 | 5.365 ±.037 | .03476  | 138.85                 | 1.30 | 136.25 |
| 252-4.905VS | 5.478           | .255 ±.006 | 4.968 ±.033 | .83799  | 139.15                 | 6.50 | 126.20 |



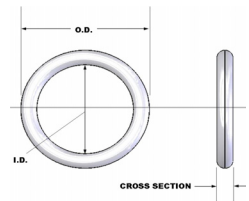
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 103-5.272ES | 5.491           | .103 ±.003 | 5.285 ±.035 | .14104  | 139.45                 | 2.60  | 134.25 |
| 70-5.360    | 5.500           | .070 ±.003 | 5.360 ±.037 | .06565  | 139.70                 | 1.80  | 136.15 |
| 500-4.500   | 5.500           | .500 ±.010 | 4.500 ±.030 | 3.08425 | 139.70                 | 12.70 | 114.30 |
| 103-5.290ES | 5.509           | .103 ±.003 | 5.303 ±.035 | .14151  | 139.95                 | 2.60  | 134.70 |
| 1-252       | 5.512           | .139 ±.004 | 5.234 ±.035 | .25615  | 140.00                 | 3.55  | 132.95 |
| 104-5.305   | 5.513           | .104 ±.003 | 5.305 ±.035 | .14435  | 140.05                 | 2.65  | 134.75 |
| 103-5.300ES | 5.519           | .103 ±.003 | 5.313 ±.035 | .14177  | 140.20                 | 2.60  | 134.95 |
| 70-5.379    | 5.519           | .070 ±.003 | 5.379 ±.037 | .06588  | 140.20                 | 1.80  | 136.65 |
| 125-5.270   | 5.520           | .125 ±.004 | 5.270 ±.035 | .20799  | 140.20                 | 3.20  | 133.85 |
| 1-354       | 5.520           | .210 ±.005 | 5.100 ±.037 | .57779  | 140.20                 | 5.35  | 129.55 |
| 1-429       | 5.525           | .275 ±.006 | 4.975 ±.037 | .97964  | 140.35                 | 7.00  | 126.35 |
| 140-5.253   | 5.533           | .140 ±.004 | 5.253 ±.030 | .26081  | 140.55                 | 3.55  | 133.45 |
| 170-5.118SS | 5.535           | .172 ±.005 | 5.191 ±.037 | .39148  | 140.60                 | 4.35  | 131.85 |
| 103-5.322ES | 5.542           | .103 ±.003 | 5.336 ±.035 | .14237  | 140.75                 | 2.60  | 135.55 |
| 118-5.315   | 5.551           | .118 ±.004 | 5.315 ±.035 | .18666  | 141.00                 | 3.00  | 135.00 |
| 79-5.315VS  | 5.556           | .080 ±.003 | 5.396 ±.035 | .08647  | 141.10                 | 2.05  | 137.05 |
| 197-5.197   | 5.591           | .197 ±.005 | 5.197 ±.037 | .51652  | 142.00                 | 5.00  | 132.00 |
| 103-5.380ES | 5.600           | .103 ±.003 | 5.394 ±.035 | .14389  | 142.25                 | 2.60  | 137.00 |
| 1-051       | 5.629           | .070 ±.003 | 5.489 ±.037 | .06721  | 143.00                 | 1.80  | 139.40 |
| 1-253       | 5.637           | .139 ±.004 | 5.359 ±.035 | .26210  | 143.20                 | 3.55  | 136.10 |
| 1-355       | 5.645           | .210 ±.005 | 5.225 ±.037 | .59140  | 143.40                 | 5.35  | 132.70 |
| 1-430       | 5.650           | .275 ±.006 | 5.100 ±.037 | 1.00296 | 143.50                 | 7.00  | 129.55 |
| 211-5.251   | 5.673           | .211 ±.005 | 5.251 ±.037 | .60001  | 144.10                 | 5.35  | 133.40 |
| 1-161       | 5.693           | .103 ±.003 | 5.487 ±.035 | .14633  | 144.60                 | 2.60  | 139.35 |
| 103-5.483ES | 5.703           | .103 ±.003 | 5.497 ±.035 | .14659  | 144.85                 | 2.60  | 139.60 |
| 103-5.496ES | 5.716           | .103 ±.003 | 5.510 ±.035 | .14693  | 145.20                 | 2.60  | 139.95 |
| 118-5.492   | 5.728           | .118 ±.004 | 5.492 ±.035 | .19274  | 145.50                 | 3.00  | 139.50 |
| 142-5.466   | 5.750           | .142 ±.004 | 5.466 ±.035 | .27901  | 146.05                 | 3.60  | 138.85 |
| 1-254       | 5.762           | .139 ±.004 | 5.484 ±.035 | .26806  | 146.35                 | 3.55  | 139.30 |
| 1-356       | 5.770           | .210 ±.005 | 5.350 ±.037 | .60500  | 146.55                 | 5.35  | 135.90 |
| 104-5.565   | 5.773           | .104 ±.003 | 5.565 ±.035 | .15129  | 146.65                 | 2.65  | 141.35 |
| 1-431       | 5.775           | .275 ±.006 | 5.225 ±.037 | 1.02628 | 146.70                 | 7.00  | 132.70 |
| 455-4.866   | 5.776           | .455 ±.010 | 4.866 ±.030 | 2.71804 | 146.70                 | 11.55 | 123.60 |
| 375-5.000SS | 5.777           | .377 ±.007 | 5.023 ±.037 | 1.89372 | 146.75                 | 9.60  | 127.60 |
| 125-5.531   | 5.781           | .125 ±.004 | 5.531 ±.035 | .21806  | 146.85                 | 3.20  | 140.50 |
| 139-5.503   | 5.781           | .139 ±.004 | 5.503 ±.035 | .26897  | 146.85                 | 3.55  | 139.80 |
| 139-5.503   | 5.781           | .139 ±.004 | 5.503 ±.035 | .26897  | 146.85                 | 3.55  | 139.80 |
| 121-5.562   | 5.804           | .121 ±.004 | 5.562 ±.035 | .20530  | 147.40                 | 3.05  | 141.30 |
| 103-5.602   | 5.808           | .103 ±.003 | 5.602 ±.035 | .14934  | 147.50                 | 2.60  | 142.30 |
| 210-5.450   | 5.810           | .208 ±.005 | 5.394 ±.037 | .59801  | 147.55                 | 5.30  | 137.00 |
| 438-4.938   | 5.814           | .438 ±.009 | 4.938 ±.030 | 2.54476 | 147.70                 | 11.15 | 125.45 |
| 162-5.500   | 5.824           | .162 ±.005 | 5.500 ±.037 | .36664  | 147.95                 | 4.10  | 139.70 |
| 70-5.700    | 5.843           | .070 ±.003 | 5.703 ±.037 | .06980  | 148.40                 | 1.80  | 144.85 |
| 1-052       | 5.879           | .070 ±.003 | 5.739 ±.037 | .07023  | 149.35                 | 1.80  | 145.75 |
| 1-255       | 5.887           | .139 ±.004 | 5.609 ±.035 | .27402  | 149.55                 | 3.55  | 142.45 |



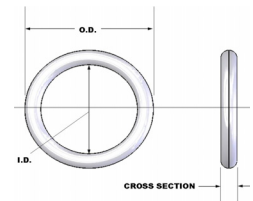
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 1-357       | 5.895           | .210 ±.005 | 5.475 ±.037 | .61860  | 149.75                 | 5.35  | 139.05 |
| 1-359       | 6.145           | .210 ±.005 | 5.725 ±.037 | .64580  | 156.10                 | 5.35  | 145.40 |
| 1-434       | 6.150           | .275 ±.006 | 5.600 ±.037 | 1.09626 | 156.20                 | 7.00  | 142.25 |
| 197-5.708VS | 6.181           | .200 ±.005 | 5.781 ±.037 | .59030  | 157.00                 | 5.10  | 146.85 |
| 71-6.048    | 6.190           | .071 ±.003 | 6.048 ±.037 | .07611  | 157.25                 | 1.80  | 153.60 |
| 1-163       | 6.193           | .103 ±.003 | 5.987 ±.035 | .15942  | 157.30                 | 2.60  | 152.05 |
| 241-5.725   | 6.207           | .241 ±.006 | 5.725 ±.037 | .85498  | 157.65                 | 6.10  | 145.40 |
| 74-6.100    | 6.228           | .074 ±.003 | 6.080 ±.035 | .08315  | 158.20                 | 1.90  | 154.45 |
| 1-258       | 6.262           | .139 ±.004 | 5.984 ±.035 | .29190  | 159.05                 | 3.55  | 152.00 |
| 1-360       | 6.270           | .210 ±.005 | 5.850 ±.037 | .65940  | 159.25                 | 5.35  | 148.60 |
| 1-435       | 6.275           | .275 ±.006 | 5.725 ±.037 | 1.11958 | 159.40                 | 7.00  | 145.40 |
| 60-6.187    | 6.307           | .060 ±.003 | 6.187 ±.037 | .05549  | 160.20                 | 1.50  | 157.15 |
| 70-6.180    | 6.320           | .070 ±.003 | 6.180 ±.037 | .07556  | 160.55                 | 1.80  | 156.95 |
| 103-6.125   | 6.331           | .103 ±.003 | 6.125 ±.035 | .16303  | 160.80                 | 2.60  | 155.60 |
| 141-6.064   | 6.346           | .141 ±.004 | 6.064 ±.035 | .30438  | 161.20                 | 3.60  | 154.05 |
| 278-5.796   | 6.352           | .278 ±.006 | 5.796 ±.037 | 1.15825 | 161.35                 | 7.05  | 147.20 |
| 176-5.906SS | 6.354           | .179 ±.005 | 5.996 ±.037 | .48818  | 161.40                 | 4.55  | 152.30 |
| 1-054       | 6.379           | .070 ±.003 | 6.239 ±.040 | .07628  | 162.05                 | 1.80  | 158.45 |
| 103.6-167ES | 6.389           | .103 ±.003 | 6.183 ±.035 | .16455  | 162.30                 | 2.60  | 157.05 |
| 1-361       | 6.395           | .210 ±.005 | 5.975 ±.037 | .67300  | 162.45                 | 5.35  | 151.75 |
| 1-436       | 6.400           | .275 ±.006 | 5.850 ±.037 | 1.14291 | 162.55                 | 7.00  | 148.60 |
| 80-6.250    | 6.410           | .080 ±.003 | 6.250 ±.040 | .09996  | 162.80                 | 2.05  | 158.75 |
| 1-164       | 6.443           | .103 ±.003 | 6.237 ±.040 | .16596  | 163.65                 | 2.60  | 158.40 |
| 70-6.284ES  | 6.446           | .070 ±.003 | 6.306 ±.040 | .07709  | 163.75                 | 1.80  | 160.15 |
| 70-6.309    | 6.449           | .070 ±.003 | 6.309 ±.040 | .07712  | 163.80                 | 1.80  | 160.25 |
| 70-6.310VS  | 6.489           | .070 ±.003 | 6.349 ±.040 | .07761  | 164.80                 | 1.80  | 161.25 |
| 375-5.750   | 6.500           | .375 ±.007 | 5.750 ±.037 | 2.12524 | 165.10                 | 9.55  | 146.05 |
| 245-6.015   | 6.505           | .245 ±.006 | 6.015 ±.037 | .92714  | 165.25                 | 6.20  | 152.80 |
| 1-259       | 6.512           | .139 ±.004 | 6.234 ±.040 | .30382  | 165.40                 | 3.55  | 158.35 |
| 224-6.075   | 6.523           | .224 ±.006 | 6.075 ±.037 | .77984  | 165.70                 | 5.70  | 154.30 |
| 1-437       | 6.525           | .275 ±.006 | 5.975 ±.037 | 1.16623 | 165.75                 | 7.00  | 151.75 |
| 112-6.378SS | 6.549           | .112 ±.004 | 6.325 ±.040 | .19923  | 166.35                 | 2.85  | 160.65 |
| 500-5.562   | 6.562           | .500 ±.010 | 5.562 ±.037 | 3.73935 | 166.70                 | 12.70 | 141.30 |
| 103-6.380   | 6.586           | .103 ±.003 | 6.380 ±.040 | .16970  | 167.30                 | 2.60  | 162.05 |
| 63-6.400VS  | 6.588           | .064 ±.003 | 6.460 ±.040 | .06593  | 167.35                 | 1.65  | 164.10 |
| 157-6.299   | 6.613           | .157 ±.005 | 6.299 ±.040 | .39265  | 167.95                 | 4.00  | 160.00 |
| 103-6.400ES | 6.622           | .103 ±.003 | 6.416 ±.040 | .17065  | 168.20                 | 2.60  | 162.95 |
| 139-6.350   | 6.628           | .139 ±.003 | 6.350 ±.040 | .30935  | 168.35                 | 3.55  | 161.30 |
| 1-055       | 6.629           | .070 ±.003 | 6.489 ±.040 | .07930  | 168.40                 | 1.80  | 164.80 |
| 103-6.424   | 6.630           | .103 ±.003 | 6.424 ±.040 | .17086  | 168.40                 | 2.60  | 163.15 |
| 1-362       | 6.645           | .210 ±.005 | 6.225 ±.040 | .70021  | 168.80                 | 5.35  | 158.10 |
| 70-6.520    | 6.660           | .070 ±.003 | 6.520 ±.040 | .07967  | 169.15                 | 1.80  | 165.60 |
| 80-6.500    | 6.660           | .080 ±.003 | 6.500 ±.040 | .10391  | 169.15                 | 2.05  | 165.10 |
| 211-6.256   | 6.678           | .211 ±.005 | 6.256 ±.040 | .71041  | 169.60                 | 5.35  | 158.90 |
| 256-6.181   | 6.684           | .256 ±.006 | 6.172 ±.037 | 1.03943 | 169.75                 | 6.50  | 156.75 |



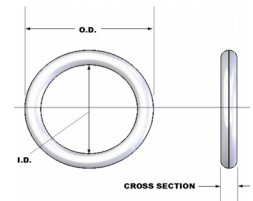
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 94-6.500    | 6.688           | .094 ±.003 | 6.500 ±.040 | .14376  | 169.90                 | 2.40  | 165.10 |
| 157-6.299   | 6.613           | .157 ±.005 | 6.299 ±.040 | .39265  | 167.95                 | 4.00  | 160.00 |
| 103-6.400ES | 6.622           | .103 ±.003 | 6.416 ±.040 | .17065  | 168.20                 | 2.60  | 162.95 |
| 139-6.350   | 6.628           | .139 ±.003 | 6.350 ±.040 | .30935  | 168.35                 | 3.55  | 161.30 |
| 1-055       | 6.629           | .070 ±.003 | 6.489 ±.040 | .07930  | 168.40                 | 1.80  | 164.80 |
| 103-6.424   | 6.630           | .103 ±.003 | 6.424 ±.040 | .17086  | 168.40                 | 2.60  | 163.15 |
| 1-362       | 6.645           | .210 ±.005 | 6.225 ±.040 | .70021  | 168.80                 | 5.35  | 158.10 |
| 70-6.520    | 6.660           | .070 ±.003 | 6.520 ±.040 | .07967  | 169.15                 | 1.80  | 165.60 |
| 80-6.500    | 6.660           | .080 ±.003 | 6.500 ±.040 | .10391  | 169.15                 | 2.05  | 165.10 |
| 211-6.256   | 6.678           | .211 ±.005 | 6.256 ±.040 | .71041  | 169.60                 | 5.35  | 158.90 |
| 256-6.181   | 6.684           | .256 ±.006 | 6.172 ±.037 | 1.03943 | 169.75                 | 6.50  | 156.75 |
| 94-6.500    | 6.688           | .094 ±.003 | 6.500 ±.040 | .14376  | 169.90                 | 2.40  | 165.10 |
| 1-165       | 6.693           | .103 ±.003 | 6.487 ±.040 | .17250  | 170.00                 | 2.60  | 164.75 |
| 91-6.394SS  | 6.696           | .093 ±.003 | 6.510 ±.040 | .14091  | 170.10                 | 2.35  | 165.35 |
| 118-6.378VS | 6.700           | .120 ±.004 | 6.460 ±.040 | .23379  | 170.20                 | 3.05  | 164.10 |
| 241-6.225   | 6.707           | .241 ±.006 | 6.225 ±.040 | .92664  | 170.35                 | 6.10  | 158.10 |
| 125-6.460   | 6.710           | .125 ±.004 | 6.460 ±.040 | .25387  | 170.45                 | 3.20  | 164.10 |
| 375-5.850VS | 6.712           | .381 ±.007 | 5.950 ±.037 | 2.26758 | 170.50                 | 9.70  | 151.15 |
| 103-6.501ES | 6.724           | .103 ±.003 | 6.518 ±.040 | .17332  | 170.80                 | 2.60  | 165.55 |
| 50-6.567VS  | 6.729           | .050 ±.003 | 6.629 ±.040 | .04120  | 170.90                 | 1.25  | 168.40 |
| 164-6.299SS | 6.729           | .167 ±.005 | 6.395 ±.040 | .45155  | 170.90                 | 4.25  | 162.45 |
| 45-6.690    | 6.757           | .045 ±.003 | 6.667 ±.040 | .03354  | 171.65                 | 1.15  | 169.35 |
| 1-260       | 6.762           | .139 ±.004 | 6.484 ±.040 | .31574  | 171.75                 | 3.55  | 164.70 |
| 210-6.350   | 6.770           | .210 ±.005 | 6.350 ±.040 | .71381  | 171.95                 | 5.35  | 161.30 |
| 1-438       | 6.775           | .275 ±.006 | 6.225 ±.040 | 1.21288 | 172.10                 | 7.00  | 158.10 |
| 258-6.179VS | 6.780           | .261 ±.006 | 6.258 ±.040 | 1.09573 | 172.20                 | 6.65  | 158.95 |
| 140-6.516   | 6.796           | .140 ±.004 | 6.516 ±.040 | .32189  | 172.60                 | 3.55  | 165.50 |
| 70-6.687    | 6.827           | .070 ±.003 | 6.687 ±.040 | .08169  | 173.40                 | 1.80  | 169.85 |
| 260-6.325   | 6.845           | .260 ±.006 | 6.325 ±.040 | 1.09835 | 173.85                 | 6.60  | 160.65 |
| 500-5.750VS | 6.867           | .509 ±.010 | 5.849 ±.037 | 4.06439 | 174.40                 | 12.95 | 148.55 |
| 70-6.734    | 6.874           | .070 ±.003 | 6.734 ±.040 | .08226  | 174.60                 | 1.80  | 171.05 |
| 1-056       | 6.879           | .070 ±.003 | 6.739 ±.040 | .08232  | 174.75                 | 1.80  | 171.15 |
| 139-6.609   | 6.887           | .139 ±.004 | 6.609 ±.040 | .32170  | 174.95                 | 3.55  | 167.85 |
| 1-363       | 6.895           | .210 ±.005 | 6.475 ±.040 | .72741  | 175.15                 | 5.35  | 164.45 |
| 103-6.674ES | 6.897           | .103 ±.003 | 6.691 ±.040 | .17784  | 175.20                 | 2.60  | 169.95 |
| 47-6.812    | 6.906           | .047 ±.003 | 6.812 ±.040 | .03738  | 175.40                 | 1.20  | 173.05 |
| 139-6.630ES | 6.924           | .139 ±.004 | 6.646 ±.040 | .32346  | 175.85                 | 3.55  | 168.80 |
| 70-6.722SS  | 6.927           | .071 ±.003 | 6.785 ±.040 | .08528  | 175.95                 | 1.80  | 172.35 |
| 1-166       | 6.943           | .103 ±.003 | 6.737 ±.040 | .17905  | 176.35                 | 2.60  | 171.10 |
| 500-6.000   | 7.000           | .500 ±.010 | 6.000 ±.037 | 4.00953 | 177.80                 | 12.70 | 152.40 |
| 1-261       | 7.012           | .139 ±.004 | 6.734 ±.040 | .32765  | 178.10                 | 3.55  | 171.05 |
| 1-439       | 7.025           | .275 ±.006 | 6.475 ±.040 | 1.25953 | 178.45                 | 7.00  | 164.45 |
| 258-6.437VS | 7.042           | .261 ±.006 | 6.520 ±.040 | 1.13976 | 178.85                 | 6.65  | 165.60 |
| 103-6.850ES | 7.073           | .103 ±.003 | 6.867 ±.040 | .18245  | 179.65                 | 2.60  | 174.40 |
| 140-6.797   | 7.077           | .140 ±.004 | 6.797 ±.040 | .33548  | 179.75                 | 3.55  | 172.65 |



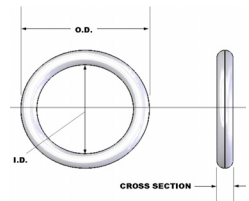
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |             |             |          | Metric Dimensions (mm) |       |        |
|-------------|-----------------|-------------|-------------|----------|------------------------|-------|--------|
|             | OD              | C/S         | ID          | Volume   | OD                     | C/S   | ID     |
| 150-6.650SS | 7.084           | .153 ±.005  | 6.778 ±.040 | .40033   | 179.95                 | 3.90  | 172.15 |
| 210-6.666   | 7.086           | .210 ±.005  | 6.666 ±.040 | .74819   | 180.00                 | 5.35  | 169.30 |
| 70-6.950    | 7.090           | .070 ±.003  | 6.950 ±.040 | .08487   | 180.10                 | 1.80  | 176.55 |
| 60-7.000    | 7.120           | .060 ±.003  | 7.000 ±.040 | .06271   | 180.85                 | 1.50  | 177.80 |
| 1-057       | 7.129           | .070 ±.003  | 6.989 ±.040 | .08535   | 181.10                 | 1.80  | 177.50 |
| 157-6.830   | 7.144           | .157 ±.005  | 6.830 ±.040 | .42494   | 181.45                 | 4.00  | 173.50 |
| 1-364       | 7.145           | .210 ±.005  | 6.725 ±.040 | .75461   | 181.50                 | 5.35  | 170.80 |
| 139-6.850ES | 7.145           | .139 ±.004  | 6.867 ±.040 | .33399   | 181.50                 | 3.55  | 174.40 |
| 275-6.600   | 7.150           | .275 ±.006  | 6.600 ±.040 | 1.28286  | 181.60                 | 7.00  | 167.65 |
| 1-167       | 7.193           | .103 ±.003  | 6.987 ±.040 | .18559   | 182.70                 | 2.60  | 177.45 |
| 455-6.308   | 7.218           | .455 ±.010  | 6.308 ±.040 | 3.45463  | 183.35                 | 11.55 | 160.20 |
| 500-6.264   | 7.219           | .497 ±.010  | 6.225 ±.040 | 4.09686  | 183.35                 | 12.60 | 158.10 |
| 224-6.783   | 7.231           | .224 ±.006  | 6.783 ±.040 | .86750   | 183.65                 | 5.70  | 172.30 |
| 1.062-5.125 | 7.249           | 1.062 ±.015 | 5.125 ±.037 | 17.21745 | 184.10                 | 26.95 | 130.20 |
| 104-7.053   | 7.261           | .104 ±.003  | 7.053 ±.040 | .19100   | 184.45                 | 2.65  | 179.15 |
| 1-262       | 7.262           | .139 ±.004  | 6.984 ±.040 | .33957   | 184.45                 | 3.55  | 177.40 |
| 1-440       | 7.275           | .275 ±.006  | 6.725 ±.040 | 1.30618  | 184.80                 | 7.00  | 170.80 |
| 160-7.006   | 7.326           | .160 ±.005  | 7.006 ±.040 | .45264   | 186.10                 | 4.05  | 177.95 |
| 1-058       | 7.379           | .070 ±.003  | 7.239 ±.045 | .08837   | 187.45                 | 1.80  | 183.85 |
| 1-365       | 7.395           | .210 ±.005  | 6.975 ±.040 | .78182   | 187.85                 | 5.35  | 177.15 |
| 312-6.700VS | 7.400           | .315 ±.007  | 6.770 ±.040 | 1.73461  | 187.95                 | 8.00  | 171.95 |
| 380-6.640   | 7.400           | .380 ±.007  | 6.640 ±.040 | 2.50117  | 187.95                 | 9.65  | 168.65 |
| 295-6.835NS | 7.410           | .294 ±.006  | 6.822 ±.040 | 1.51765  | 188.20                 | 7.45  | 173.30 |
| 1-168       | 7.443           | .103 ±.003  | 7.237 ±.045 | .19214   | 189.05                 | 2.60  | 183.80 |
| 380-6.688   | 7.448           | .380 ±.007  | 6.688 ±.040 | 2.51828  | 189.20                 | 9.65  | 169.90 |
| 241-6.975   | 7.457           | .241 ±.006  | 6.975 ±.040 | 1.03412  | 189.40                 | 6.10  | 177.15 |
| 70-7.360ES  | 7.511           | .070 ±.003  | 7.371 ±.045 | .08996   | 190.80                 | 1.80  | 187.20 |
| 1-263       | 7.512           | .139 ±.004  | 7.234 ±.045 | .35149   | 190.80                 | 3.55  | 183.75 |
| 103-7.300ES | 7.525           | .103 ±.003  | 7.319 ±.045 | .19428   | 191.15                 | 2.60  | 185.90 |
| 1-441       | 7.525           | .275 ±.006  | 6.975 ±.040 | 1.35283  | 191.15                 | 7.00  | 177.15 |
| 375-6.650VS | 7.525           | .381 ±.007  | 6.763 ±.040 | 2.55877  | 191.15                 | 9.70  | 171.80 |
| 295-6.910SS | 7.558           | .297 ±.006  | 6.964 ±.040 | 1.58033  | 191.95                 | 7.55  | 176.90 |
| 520-6.519   | 7.559           | .520 ±.011  | 6.519 ±.040 | 4.69632  | 192.00                 | 13.20 | 165.60 |
| 437-6.750   | 7.624           | .437 ±.009  | 6.750 ±.040 | 3.38649  | 193.65                 | 11.10 | 171.45 |
| 500-6.625   | 7.625           | .500 ±.010  | 6.625 ±.040 | 4.39506  | 193.70                 | 12.70 | 168.30 |
| 1-059       | 7.629           | .070 ±.003  | 7.489 ±.045 | .09139   | 193.80                 | 1.80  | 190.20 |
| 70-7.500    | 7.640           | .070 ±.003  | 7.500 ±.045 | .09152   | 194.05                 | 1.80  | 190.50 |
| 103-7.416   | 7.641           | .103 ±.003  | 7.435 ±.045 | .19732   | 194.10                 | 2.60  | 188.85 |
| 1-366       | 7.645           | .210 ±.005  | 7.225 ±.045 | .80902   | 194.20                 | 5.35  | 183.50 |
| 1-169       | 7.693           | .103 ±.003  | 7.487 ±.045 | .19868   | 195.40                 | 2.60  | 190.15 |
| 241-7.225   | 7.707           | .241 ±.006  | 7.225 ±.045 | 1.06995  | 195.75                 | 6.10  | 183.50 |
| 70-7.613    | 7.753           | .070 ±.003  | 7.613 ±.045 | .09289   | 196.95                 | 1.80  | 193.35 |
| 1-264       | 7.762           | .139 ±.004  | 7.484 ±.045 | .36341   | 197.15                 | 3.55  | 190.10 |
| 1-442       | 7.775           | .275 ±.006  | 7.225 ±.045 | 1.39948  | 197.50                 | 7.00  | 183.50 |



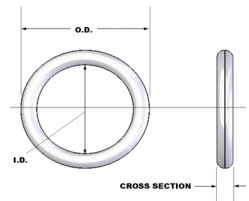
# Engineers Guide for O-Rings



| Mold IDen   | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|-------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|             | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| 103-7.583ES | 7.808           | .103 ±.003 | 7.602 ±.045 | .20169  | 198.30                 | 2.60  | 193.10 |
| 103-7.609   | 7.815           | .103 ±.004 | 7.609 ±.045 | .20187  | 198.50                 | 2.60  | 193.25 |
| 140-7.562   | 7.842           | .140 ±.004 | 7.562 ±.045 | .37248  | 199.20                 | 3.55  | 192.10 |
| 1-060       | 7.879           | .070 ±.003 | 7.739 ±.045 | .09441  | 200.15                 | 1.80  | 196.55 |
| 1-367       | 7.895           | .210 ±.005 | 7.475 ±.045 | .83622  | 200.55                 | 5.35  | 189.85 |
| 103-7.673ES | 7.898           | .103 ±.003 | 7.692 ±.045 | .20405  | 200.60                 | 2.60  | 195.40 |
| 139-7.609ES | 7.906           | .139 ±.004 | 7.628 ±.045 | .37027  | 200.80                 | 3.55  | 193.75 |
| 375-7.125SS | 7.911           | .377 ±.007 | 7.157 ±.040 | 2.64209 | 200.95                 | 9.60  | 181.80 |
| 281-7.378   | 7.940           | .281 ±.006 | 7.378 ±.045 | 1.49219 | 201.70                 | 7.15  | 187.40 |
| 1-170       | 7.943           | .103 ±.003 | 7.737 ±.045 | .20523  | 201.75                 | 2.60  | 196.50 |
| 241-7.475   | 7.957           | .241 ±.006 | 7.475 ±.045 | 1.10577 | 202.10                 | 6.10  | 189.85 |
| 236-7.441   | 7.985           | .238 ±.006 | 7.509 ±.045 | 1.08275 | 202.80                 | 6.05  | 190.75 |
| 215-7.581   | 8.001           | .215 ±.005 | 7.571 ±.045 | .88804  | 203.25                 | 5.45  | 192.30 |
| 70-7.870    | 8.010           | .070 ±.003 | 7.870 ±.045 | .09600  | 203.45                 | 1.80  | 199.90 |
| 1-265       | 8.012           | .139 ±.004 | 7.734 ±.045 | .37533  | 203.50                 | 3.55  | 196.45 |
| 1-443       | 8.025           | .275 ±.006 | 7.475 ±.045 | 1.44613 | 203.85                 | 7.00  | 189.85 |
| 103-7.862   | 8.068           | .103 ±.003 | 7.862 ±.045 | .20850  | 204.95                 | 2.60  | 199.70 |
| 103-7.848ES | 8.074           | .103 ±.003 | 7.868 ±.045 | .20865  | 205.10                 | 2.60  | 199.85 |
| 146-7.700SS | 8.113           | .148 ±.005 | 7.817 ±.040 | .43048  | 206.05                 | 3.75  | 198.55 |
| 278-7.567   | 8.123           | .278 ±.006 | 7.567 ±.045 | 1.49597 | 206.30                 | 7.05  | 192.20 |
| 1-061       | 8.129           | .070 ±.003 | 7.989 ±.045 | .09744  | 206.50                 | 1.80  | 202.90 |
| 103-7.950NS | 8.145           | .103 ±.003 | 7.939 ±.045 | .21051  | 206.90                 | 2.60  | 201.65 |
| 1-368       | 8.145           | .210 ±.005 | 7.725 ±.045 | .86343  | 206.90                 | 5.35  | 196.20 |
| 139-7.850ES | 8.148           | .139 ±.004 | 7.870 ±.045 | .38181  | 206.95                 | 3.55  | 199.90 |
| 375-7.324SS | 8.167           | .379 ±.007 | 7.409 ±.045 | 2.76022 | 207.45                 | 9.65  | 188.20 |
| 103-7.950ES | 8.176           | .103 ±.003 | 7.970 ±.045 | .21132  | 207.65                 | 2.60  | 202.45 |
| 1-171       | 8.193           | .103 ±.003 | 7.987 ±.045 | .21177  | 208.10                 | 2.60  | 202.85 |
| 241-7.725   | 8.207           | .241 ±.006 | 7.725 ±.045 | 1.14160 | 208.45                 | 6.10  | 196.20 |
| 139-7.950ES | 8.248           | .139 ±.004 | 7.970 ±.045 | .38658  | 209.50                 | 3.55  | 202.45 |
| 375-7.500   | 8.250           | .375 ±.007 | 7.500 ±.045 | 2.73245 | 209.55                 | 9.55  | 190.50 |
| 1-266       | 8.262           | .139 ±.004 | 7.984 ±.045 | .38724  | 209.85                 | 3.55  | 202.80 |
| 1-444       | 8.275           | .275 ±.006 | 7.725 ±.045 | 1.49278 | 210.20                 | 7.00  | 196.20 |
| 70-8.135ES  | 8.288           | .070 ±.003 | 8.148 ±.045 | .09936  | 210.50                 | 1.80  | 206.95 |
| 103-8.039ES | 8.291           | .104 ±.003 | 8.083 ±.045 | .21849  | 210.60                 | 2.65  | 205.30 |
| 500-7.250ES | 8.351           | .506 ±.010 | 7.339 ±.045 | 4.95603 | 212.10                 | 12.85 | 186.40 |
| 1-369       | 8.395           | .210 ±.005 | 7.975 ±.045 | .89063  | 213.25                 | 5.35  | 202.55 |
| 1-172       | 8.443           | .103 ±.003 | 8.237 ±.050 | .21831  | 214.45                 | 2.60  | 209.20 |
| 241-7.975   | 8.457           | .241 ±.006 | 7.975 ±.045 | 1.17743 | 214.80                 | 6.10  | 202.55 |
| 199-8.029ES | 8.483           | .200 ±.005 | 8.083 ±.045 | .81750  | 215.45                 | 5.10  | 205.30 |
| 375-7.733   | 8.483           | .375 ±.007 | 7.733 ±.045 | 2.81330 | 215.45                 | 9.55  | 196.40 |
| 103-8.282ES | 8.509           | .103 ±.003 | 8.303 ±.050 | .22004  | 216.15                 | 2.60  | 210.90 |
| 1-267       | 8.512           | .139 ±.004 | 8.234 ±.050 | .39916  | 216.20                 | 3.55  | 209.15 |
| 1-445       | 8.525           | .275 ±.006 | 7.975 ±.045 | 1.53943 | 216.55                 | 7.00  | 202.55 |
| 500-7.250VS | 8.541           | .518 ±.010 | 7.505 ±.045 | 5.31173 | 216.95                 | 13.15 | 190.65 |



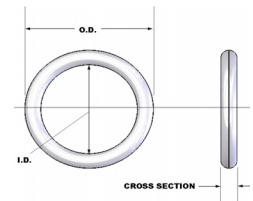
# Engineers Guide for O-Rings



| Mold IDen          | Inch Dimensions |            |             |         | Metric Dimensions (mm) |       |        |
|--------------------|-----------------|------------|-------------|---------|------------------------|-------|--------|
|                    | OD              | C/S        | ID          | Volume  | OD                     | C/S   | ID     |
| <b>70-8.400ES</b>  | 8.553           | .070 ±.003 | 8.413 ±.050 | .10256  | 217.25                 | 1.80  | 213.70 |
| <b>140-8.295</b>   | 8.575           | .140 ±.004 | 8.295 ±.050 | .40793  | 217.80                 | 3.55  | 210.70 |
| <b>1-370</b>       | 8.645           | .210 ±.005 | 8.225 ±.050 | .91783  | 219.60                 | 5.35  | 208.90 |
| <b>279-8.105</b>   | 8.663           | .279 ±.006 | 8.105 ±.045 | 1.61027 | 220.05                 | 7.10  | 205.85 |
| <b>224-8.240</b>   | 8.688           | .224 ±.006 | 8.240 ±.045 | 1.04788 | 220.70                 | 5.70  | 209.30 |
| <b>1-173</b>       | 8.693           | .103 ±.003 | 8.487 ±.050 | .22486  | 220.80                 | 2.60  | 215.55 |
| <b>1-268</b>       | 8.762           | .139 ±.004 | 8.484 ±.050 | .41108  | 222.55                 | 3.55  | 215.50 |
| <b>275-8.225</b>   | 8.775           | .275 ±.006 | 8.225 ±.045 | 1.58608 | 222.90                 | 7.00  | 208.90 |
| <b>118-8.504VS</b> | 8.822           | .119 ±.004 | 8.584 ±.050 | .30409  | 224.10                 | 3.00  | 218.05 |
| <b>331-8.197</b>   | 8.859           | .331 ±.007 | 8.197 ±.045 | 2.30538 | 225.00                 | 8.40  | 208.20 |
| <b>270-8.240SS</b> | 8.882           | .273 ±.006 | 8.336 ±.045 | 1.58313 | 225.60                 | 6.95  | 211.75 |
| <b>1-371</b>       | 8.895           | .210 ±.005 | 8.475 ±.050 | .94504  | 225.95                 | 5.35  | 215.25 |
| <b>187-8.553</b>   | 8.896           | .186 ±.005 | 8.524 ±.050 | .74350  | 225.95                 | 4.70  | 216.50 |
| <b>375-8.159</b>   | 8.909           | .375 ±.007 | 8.159 ±.045 | 2.96111 | 226.30                 | 9.55  | 207.25 |
| <b>1-174</b>       | 8.943           | .103 ±.003 | 8.737 ±.050 | .23140  | 227.15                 | 2.60  | 221.90 |
| <b>275-8.350ES</b> | 8.958           | .277 ±.006 | 8.404 ±.045 | 1.64350 | 227.55                 | 7.05  | 213.45 |
| <b>375-8.130SS</b> | 8.983           | .379 ±.007 | 8.225 ±.050 | 3.04943 | 228.15                 | 9.65  | 208.90 |
| <b>375-8.250</b>   | 9.000           | .375 ±.007 | 8.250 ±.050 | 2.99269 | 228.60                 | 9.55  | 209.55 |
| <b>1-269</b>       | 9.012           | .139 ±.004 | 8.734 ±.050 | .42300  | 228.90                 | 3.55  | 221.85 |
| <b>1-446</b>       | 9.025           | .275 ±.006 | 8.475 ±.055 | 1.63273 | 229.25                 | 7.00  | 215.25 |
| <b>241-8.475SS</b> | 9.032           | .243 ±.006 | 8.546 ±.055 | 1.28054 | 229.40                 | 6.15  | 217.05 |
| <b>103-8.825ES</b> | 9.053           | .103 ±.003 | 8.847 ±.050 | .23428  | 229.95                 | 2.60  | 224.70 |
| <b>210-8.641</b>   | 9.061           | .210 ±.005 | 8.641 ±.050 | .96310  | 230.15                 | 5.35  | 219.50 |
| <b>103-8.840ES</b> | 9.068           | .103 ±.003 | 8.862 ±.050 | .23467  | 230.35                 | 2.60  | 225.10 |
| <b>1-372</b>       | 9.145           | .210 ±.005 | 8.725 ±.050 | .97224  | 232.30                 | 5.35  | 221.60 |
| <b>388-8.380</b>   | 9.156           | .388 ±.007 | 8.380 ±.050 | 3.25689 | 232.55                 | 9.85  | 212.85 |
| <b>1-175</b>       | 9.193           | .103 ±.003 | 8.987 ±.050 | .23795  | 233.50                 | 2.60  | 228.25 |
| <b>103-8.998ES</b> | 9.227           | .103 ±.003 | 9.021 ±.050 | .23884  | 234.35                 | 2.60  | 229.15 |
| <b>328-8.500VS</b> | 9.231           | .331 ±.007 | 8.569 ±.050 | 2.40595 | 234.45                 | 8.40  | 217.65 |
| <b>625-8.000</b>   | 9.250           | .625 ±.012 | 8.000 ±.045 | 8.31302 | 234.95                 | 15.90 | 203.20 |
| <b>103-9.050</b>   | 9.256           | .103 ±.003 | 9.050 ±.050 | .23959  | 235.10                 | 2.60  | 229.85 |
| <b>1-270</b>       | 9.262           | .139 ±.004 | 8.984 ±.050 | .43492  | 235.25                 | 3.55  | 228.20 |
| <b>275-8.725</b>   | 9.275           | .275 ±.006 | 8.725 ±.055 | 1.67937 | 235.60                 | 7.00  | 221.60 |
| <b>140-9.072</b>   | 9.352           | .140 ±.004 | 9.072 ±.050 | .44550  | 237.55                 | 3.55  | 230.45 |
| <b>375-8.505SS</b> | 9.362           | .379 ±.007 | 8.604 ±.050 | 3.18375 | 237.80                 | 9.65  | 218.55 |
| <b>312-8.750</b>   | 9.374           | .312 ±.006 | 8.750 ±.050 | 2.17657 | 238.10                 | 7.90  | 222.25 |
| <b>1-373</b>       | 9.395           | .210 ±.005 | 8.975 ±.050 | .99944  | 238.65                 | 5.35  | 227.95 |
| <b>1-176</b>       | 9.443           | .103 ±.003 | 9.237 ±.055 | .24449  | 239.85                 | 2.60  | 234.60 |
| <b>103-9.250</b>   | 9.456           | .103 ±.003 | 9.250 ±.055 | .24483  | 240.20                 | 2.60  | 234.95 |
| <b>1-271</b>       | 9.512           | .139 ±.004 | 9.234 ±.055 | .44684  | 241.60                 | 3.55  | 234.55 |
| <b>1-447</b>       | 9.525           | .275 ±.006 | 8.975 ±.055 | 1.72602 | 241.95                 | 7.00  | 227.95 |
| <b>323-8.898</b>   | 9.544           | .323 ±.007 | 8.898 ±.050 | 2.37368 | 242.40                 | 8.20  | 226.00 |
| <b>70-9.435ES</b>  | 9.590           | .070 ±.003 | 9.450 ±.055 | .11510  | 243.60                 | 1.80  | 240.05 |
| <b>380-8.812ES</b> | 9.596           | .381 ±.007 | 8.834 ±.050 | 3.30054 | 243.75                 | 9.70  | 224.40 |



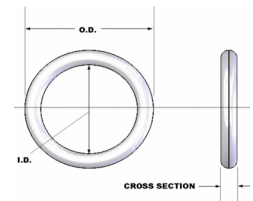
# Engineers Guide for O-Rings



| Mold IDen    | Inch Dimensions |            |              |         | Metric Dimensions (mm) |      |        |
|--------------|-----------------|------------|--------------|---------|------------------------|------|--------|
|              | OD              | C/S        | ID           | Volume  | OD                     | C/S  | ID     |
| 1-274        | 10.262          | .139 ±.004 | 9.984 ±.055  | .48259  | 260.65                 | 3.55 | 253.60 |
| 215-9.837    | 10.267          | .215 ±.005 | 9.837 ±.055  | 1.14649 | 260.80                 | 5.45 | 249.85 |
| 159-9.950    | 10.268          | .159 ±.005 | 9.950 ±.055  | .63058  | 260.80                 | 4.05 | 252.75 |
| 103-10.095ES | 10.327          | .103 ±.003 | 10.121 ±.055 | .26763  | 262.30                 | 2.60 | 257.05 |
| 139-10.048ES | 10.351          | .139 ±.004 | 10.073 ±.060 | .48683  | 262.90                 | 3.55 | 255.85 |
| 70-10.207ES  | 10.363          | .070 ±.003 | 10.223 ±.055 | .12445  | 263.20                 | 1.80 | 259.65 |
| 1-377        | 10.395          | .210 ±.005 | 9.975 ±.055  | 1.10825 | 264.05                 | 5.35 | 253.35 |
| 375-9.600    | 10.450          | .380 ±.007 | 9.690 ±.055  | 3.58402 | 265.40                 | 9.65 | 246.15 |
| 139-10.178   | 10.456          | .139 ±.004 | 10.178 ±.055 | .49184  | 265.60                 | 3.55 | 258.50 |
| 70-10.232SS  | 10.470          | .071 ±.003 | 10.328 ±.055 | .12934  | 265.95                 | 1.80 | 262.35 |
| 215-10.060   | 10.490          | .215 ±.005 | 10.060 ±.055 | 1.17192 | 266.45                 | 5.45 | 255.50 |
| 1-449        | 10.525          | .275 ±.006 | 9.975 ±.055  | 1.91262 | 267.35                 | 7.00 | 253.35 |
| 210-10.115ES | 10.563          | .211 ±.005 | 10.141 ±.055 | 1.13718 | 268.30                 | 5.35 | 257.60 |
| 104-10.372   | 10.580          | .104 ±.003 | 10.372 ±.055 | .27958  | 268.75                 | 2.65 | 263.45 |
| 70-10.433ES  | 10.599          | .070 ±.003 | 10.459 ±.055 | .12730  | 269.20                 | 1.80 | 265.65 |
| 241-9.975VS  | 10.606          | .244 ±.006 | 10.118 ±.055 | 1.52217 | 269.40                 | 6.20 | 257.00 |
| 167-10.186SS | 10.620          | .169 ±.005 | 10.282 ±.055 | .73650  | 269.75                 | 4.30 | 261.15 |
| 70-10.485    | 10.625          | .070 ±.003 | 10.485 ±.055 | .12761  | 269.90                 | 1.80 | 266.30 |
| 210-10.250   | 10.670          | .210 ±.005 | 10.250 ±.055 | 1.13818 | 271.00                 | 5.35 | 260.35 |
| 103-10.450ES | 10.693          | .103 ±.003 | 10.487 ±.055 | .27721  | 271.60                 | 2.60 | 266.35 |
| 210-10.300   | 10.720          | .210 ±.005 | 10.300 ±.055 | 1.14362 | 272.30                 | 5.35 | 261.60 |
| 210-10.190SS | 10.720          | .212 ±.006 | 10.296 ±.055 | 1.16528 | 272.30                 | 5.40 | 261.50 |
| 103-10.449   | 10.725          | .104 ±.003 | 10.517 ±.060 | .28345  | 272.40                 | 2.65 | 267.15 |
| 375-9.881SS  | 10.754          | .379 ±.007 | 9.996 ±.055  | 3.67711 | 273.15                 | 9.65 | 253.90 |
| 1-275        | 10.762          | .139 ±.004 | 10.484 ±.055 | .50643  | 273.35                 | 3.55 | 266.30 |
| 70-10.530SS  | 10.771          | .071 ±.003 | 10.629 ±.060 | .13309  | 273.60                 | 1.80 | 270.00 |
| 71-10.635    | 10.777          | .071 ±.003 | 10.635 ±.060 | .13316  | 273.75                 | 1.80 | 270.15 |
| 103-10.500SS | 10.870          | .105 ±.003 | 10.660 ±.060 | .29284  | 276.10                 | 2.65 | 270.75 |
| 1-378        | 10.895          | .210 ±.005 | 10.475 ±.060 | 1.16266 | 276.75                 | 5.35 | 266.05 |
| 139-10.610   | 10.915          | .139 ±.003 | 10.637 ±.060 | .51372  | 277.25                 | 3.55 | 270.20 |
| 159-10.600   | 10.918          | .159 ±.005 | 10.600 ±.060 | .67113  | 277.30                 | 4.05 | 269.25 |
| 70-10.800ES  | 10.957          | .070 ±.003 | 10.817 ±.060 | .13163  | 278.30                 | 1.80 | 274.75 |
| 351-10.270   | 10.972          | .351 ±.007 | 10.270 ±.055 | 3.22864 | 278.70                 | 8.90 | 260.85 |
| 103-10.781ES | 11.014          | .103 ±.003 | 10.808 ±.060 | .28561  | 279.75                 | 2.60 | 274.50 |
| 1-450        | 11.025          | .275 ±.006 | 10.475 ±.060 | 2.00592 | 280.05                 | 7.00 | 266.05 |
| 139-10.734   | 11.038          | .139 ±.004 | 10.760 ±.055 | .51958  | 280.35                 | 3.55 | 273.30 |
| 349-10.199VS | 11.043          | .354 ±.007 | 10.335 ±.055 | 3.30509 | 280.50                 | 9.00 | 262.50 |
| 260-10.425SS | 11.047          | .262 ±.006 | 10.523 ±.060 | 1.82668 | 280.60                 | 6.65 | 267.30 |
| 157-10.827   | 11.141          | .157 ±.005 | 10.827 ±.060 | .66804  | 283.00                 | 4.00 | 275.00 |
| 103-10.710SS | 11.168          | .105 ±.003 | 10.958 ±.060 | .30095  | 283.65                 | 2.65 | 278.35 |
| 103-10.984   | 11.190          | .103 ±.003 | 10.984 ±.060 | .29022  | 284.25                 | 2.60 | 279.00 |
| 103-10.964ES | 11.198          | .103 ±.003 | 10.992 ±.060 | .29043  | 284.45                 | 2.60 | 279.20 |
| 70-11.085ES  | 11.242          | .070 ±.003 | 11.102 ±.065 | .13507  | 285.55                 | 1.80 | 282.00 |
| 1-276        | 11.262          | .139 ±.004 | 10.984 ±.065 | .53026  | 286.05                 | 3.55 | 279.00 |
| 275-10.725   | 11.275          | .275 ±.006 | 10.725 ±.060 | 2.05257 | 286.40                 | 7.00 | 272.40 |



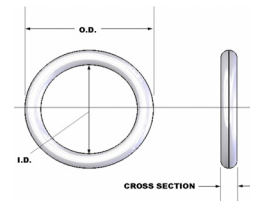
# Engineers Guide for O-Rings



| Mold IDen           | Inch Dimensions |            |              |         | Metric Dimensions (mm) |      |        |
|---------------------|-----------------|------------|--------------|---------|------------------------|------|--------|
|                     | OD              | C/S        | ID           | Volume  | OD                     | C/S  | ID     |
| <b>256-10.846SS</b> | 11.311          | .255 ±.006 | 10.801 ±.060 | 1.77386 | 287.30                 | 6.50 | 274.35 |
| <b>103-11.120</b>   | 11.326          | .103 ±.003 | 11.120 ±.065 | .29378  | 287.70                 | 2.60 | 282.45 |
| <b>139-11.034ES</b> | 11.340          | .139 ±.004 | 11.062 ±.065 | .53398  | 288.05                 | 3.55 | 281.00 |
| <b>103-11.150ES</b> | 11.384          | .103 ±.003 | 11.178 ±.065 | .29530  | 289.15                 | 2.60 | 283.90 |
| <b>1-379</b>        | 11.395          | .210 ±.005 | 10.975 ±.060 | 1.21707 | 289.45                 | 5.35 | 278.75 |
| <b>103-11.239NS</b> | 11.396          | .103 ±.003 | 11.190 ±.065 | .29562  | 289.45                 | 2.60 | 284.25 |
| <b>141-11.120</b>   | 11.402          | .141 ±.004 | 11.120 ±.065 | .55240  | 289.60                 | 3.60 | 282.45 |
| <b>103-11.096SS</b> | 11.408          | .104 ±.003 | 11.200 ±.065 | .30167  | 289.75                 | 2.65 | 284.50 |
| <b>103-11.275ES</b> | 11.481          | .103 ±.003 | 11.275 ±.065 | .29784  | 291.60                 | 2.60 | 286.40 |
| <b>375-10.690SS</b> | 11.486          | .379 ±.007 | 10.728 ±.060 | 3.93640 | 291.75                 | 9.65 | 272.50 |
| <b>70-11.339ES</b>  | 11.508          | .070 ±.003 | 11.368 ±.065 | .13829  | 292.30                 | 1.80 | 288.75 |
| <b>1-451</b>        | 11.525          | .275 ±.006 | 10.975 ±.060 | 2.09922 | 292.75                 | 7.00 | 278.75 |
| <b>70-11.240SS</b>  | 11.565          | .071 ±.003 | 11.423 ±.065 | .14296  | 293.75                 | 1.80 | 290.15 |
| <b>380-10.875</b>   | 11.635          | .380 ±.007 | 10.875 ±.060 | 4.01007 | 295.55                 | 9.65 | 276.25 |
| <b>103-11.480ES</b> | 11.715          | .103 ±.003 | 11.509 ±.065 | .30396  | 297.55                 | 2.60 | 292.35 |
| <b>93-11.500</b>    | 11.727          | .093 ±.003 | 11.541 ±.065 | .24828  | 297.85                 | 2.35 | 293.15 |
| <b>1-277</b>        | 11.762          | .139 ±.004 | 11.484 ±.065 | .55410  | 298.75                 | 3.55 | 291.70 |
| <b>1-380</b>        | 11.895          | .210 ±.005 | 11.475 ±.065 | 1.27147 | 302.15                 | 5.35 | 291.45 |
| <b>1-452</b>        | 12.025          | .275 ±.006 | 11.475 ±.060 | 2.19252 | 305.45                 | 7.00 | 291.45 |
| <b>103-11.897NS</b> | 12.052          | .103 ±.003 | 11.846 ±.065 | .31277  | 306.10                 | 2.60 | 300.90 |
| <b>290-11.475ES</b> | 12.114          | .291 ±.006 | 11.532 ±.065 | 2.47032 | 307.70                 | 7.40 | 292.90 |
| <b>70-11.989</b>    | 12.129          | .070 ±.003 | 11.989 ±.065 | .14580  | 308.10                 | 1.80 | 304.50 |
| <b>1-278</b>        | 12.262          | .139 ±.004 | 11.984 ±.065 | .57794  | 311.45                 | 3.55 | 304.40 |
| <b>339-11.654</b>   | 12.316          | .339 ±.007 | 11.638 ±.065 | 3.39615 | 312.85                 | 8.60 | 295.60 |
| <b>140-12.073</b>   | 12.353          | .140 ±.004 | 12.073 ±.065 | .59063  | 313.75                 | 3.55 | 306.65 |
| <b>103-12.155ES</b> | 12.392          | .103 ±.003 | 12.186 ±.065 | .32168  | 314.75                 | 2.60 | 309.55 |
| <b>1-381</b>        | 12.395          | .210 ±.005 | 11.975 ±.065 | 1.32588 | 314.85                 | 5.35 | 304.15 |
| <b>142-12.214</b>   | 12.498          | .142 ±.004 | 12.214 ±.065 | .61474  | 317.45                 | 3.60 | 310.25 |
| <b>142-12.224</b>   | 12.508          | .142 ±.004 | 12.224 ±.065 | .61524  | 317.70                 | 3.60 | 310.50 |
| <b>1-453</b>        | 12.525          | .275 ±.006 | 11.975 ±.060 | 2.28582 | 318.15                 | 7.00 | 304.15 |
| <b>275-12.000</b>   | 12.550          | .275 ±.006 | 12.000 ±.060 | 2.29048 | 318.75                 | 7.00 | 304.80 |
| <b>139-12.278</b>   | 12.556          | .139 ±.004 | 12.278 ±.065 | .59195  | 318.90                 | 3.55 | 311.85 |
| <b>277-12.064</b>   | 12.618          | .277 ±.006 | 12.064 ±.060 | 2.33641 | 320.50                 | 7.05 | 306.45 |
| <b>256-12.205</b>   | 12.674          | .255 ±.006 | 12.164 ±.060 | 1.99254 | 321.90                 | 6.50 | 308.95 |
| <b>139-12.484</b>   | 12.794          | .139 ±.004 | 12.516 ±.065 | .60328  | 324.95                 | 3.55 | 317.90 |
| <b>370-12.157</b>   | 12.817          | .368 ±.007 | 12.081 ±.065 | 4.15978 | 325.55                 | 9.35 | 306.85 |
| <b>209-12.413</b>   | 12.831          | .209 ±.005 | 12.413 ±.065 | 1.36038 | 325.90                 | 5.30 | 315.30 |
| <b>370-12.106</b>   | 12.846          | .370 ±.007 | 12.106 ±.065 | 4.21423 | 326.30                 | 9.40 | 307.50 |
| <b>70-12.720</b>    | 12.860          | .070 ±.003 | 12.720 ±.065 | .15463  | 326.65                 | 1.80 | 323.10 |
| <b>210-12.475</b>   | 12.895          | .210 ±.005 | 12.475 ±.065 | 1.38029 | 327.55                 | 5.35 | 316.85 |
| <b>139-12.475VS</b> | 12.935          | .141 ±.004 | 12.653 ±.065 | .62760  | 328.55                 | 3.60 | 321.40 |
| <b>103-12.718ES</b> | 12.996          | .104 ±.003 | 12.788 ±.065 | .34405  | 330.10                 | 2.65 | 324.80 |
| <b>375-12.250VS</b> | 13.021          | .376 ±.007 | 12.269 ±.065 | 4.41097 | 330.75                 | 9.55 | 311.65 |
| <b>1-454</b>        | 13.025          | .275 ±.006 | 12.475 ±.060 | 2.37911 | 330.85                 | 7.00 | 316.85 |



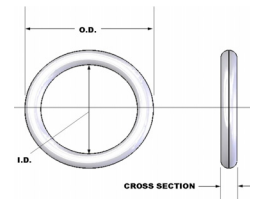
# Engineers Guide for O-Rings



| Mold IDen    | Inch Dimensions |            |              |          | Metric Dimensions (mm) |       |        |
|--------------|-----------------|------------|--------------|----------|------------------------|-------|--------|
|              | OD              | C/S        | ID           | Volume   | OD                     | C/S   | ID     |
| 1-279        | 13.262          | .139 ±.004 | 12.984 ±.065 | .62561   | 336.85                 | 3.55  | 329.80 |
| 70-13.114ES  | 13.274          | .070 ±.003 | 13.134 ±.065 | .15964   | 337.15                 | 1.80  | 333.60 |
| 139-13.062   | 13.340          | .139 ±.004 | 13.062 ±.065 | .62933   | 338.85                 | 3.55  | 331.80 |
| 139-13.114   | 13.394          | .140 ±.004 | 13.114 ±.065 | .64098   | 340.20                 | 3.55  | 333.10 |
| 1-382        | 13.395          | .210 ±.005 | 12.975 ±.065 | 1.43469  | 340.25                 | 5.35  | 329.55 |
| 139-13.234   | 13.512          | .139 ±.003 | 13.234 ±.070 | .63753   | 343.20                 | 3.55  | 336.15 |
| 1-455        | 13.525          | .275 ±.006 | 12.975 ±.060 | 2.47241  | 343.55                 | 7.00  | 329.55 |
| 139-13.248   | 13.526          | .139 ±.004 | 13.248 ±.065 | .63819   | 343.55                 | 3.55  | 336.50 |
| 312-12.750SS | 13.531          | .316 ±.007 | 12.899 ±.065 | 3.25598  | 343.70                 | 8.05  | 327.65 |
| 375-12.750SS | 13.657          | .379 ±.007 | 12.899 ±.065 | 4.70599  | 346.90                 | 9.65  | 327.65 |
| 103-13.425ES | 13.665          | .103 ±.003 | 13.459 ±.065 | .35501   | 347.10                 | 2.60  | 341.85 |
| 224-13.252   | 13.700          | .224 ±.006 | 13.252 ±.060 | 1.66839  | 348.00                 | 5.70  | 336.60 |
| 139-13.484   | 13.762          | .139 ±.004 | 13.484 ±.065 | .64944   | 349.55                 | 3.55  | 342.50 |
| 210-13.475   | 13.895          | .210 ±.005 | 13.475 ±.065 | 1.48910  | 352.95                 | 5.35  | 342.25 |
| 210-13.375SS | 13.938          | .212 ±.006 | 13.514 ±.070 | 1.52214  | 354.05                 | 5.40  | 343.25 |
| 1-456        | 14.025          | .275 ±.006 | 13.475 ±.070 | 2.56571  | 356.25                 | 7.00  | 342.25 |
| 1-280        | 14.262          | .139 ±.004 | 13.984 ±.065 | .67328   | 362.25                 | 3.55  | 355.20 |
| 1-383        | 14.395          | .210 ±.005 | 13.975 ±.070 | 1.54350  | 365.65                 | 5.35  | 354.95 |
| 1-457        | 14.525          | .275 ±.006 | 13.975 ±.070 | 2.65901  | 368.95                 | 7.00  | 354.95 |
| 224-14.146   | 14.594          | .224 ±.006 | 14.146 ±.070 | 1.77907  | 370.70                 | 5.70  | 359.30 |
| 139-14.484   | 14.762          | .139 ±.004 | 14.484 ±.065 | .69712   | 374.95                 | 3.55  | 367.90 |
| 339-14.189   | 14.804          | .338 ±.007 | 14.128 ±.070 | 4.07776  | 376.00                 | 8.60  | 358.85 |
| 87-14.470SS  | 14.825          | .088 ±.003 | 14.649 ±.070 | .28159   | 376.55                 | 2.25  | 372.10 |
| 1-458        | 15.025          | .275 ±.006 | 14.475 ±.070 | 2.75231  | 381.65                 | 7.00  | 367.65 |
| 288-14.250SS | 15.101          | .293 ±.006 | 14.515 ±.070 | 3.13669  | 383.55                 | 7.45  | 368.70 |
| 500-14.156   | 15.156          | .500 ±.010 | 14.156 ±.070 | 9.04056  | 384.95                 | 12.70 | 359.55 |
| 197-14.764   | 15.158          | .197 ±.005 | 14.764 ±.070 | 1.43263  | 385.00                 | 5.00  | 375.00 |
| 104-14.990   | 15.198          | .104 ±.003 | 14.990 ±.070 | .40282   | 386.05                 | 2.65  | 380.75 |
| 1-281        | 15.262          | .139 ±.004 | 14.984 ±.065 | .72095   | 387.65                 | 3.55  | 380.60 |
| 225-14.900NS | 15.284          | .224 ±.006 | 14.836 ±.070 | 1.86449  | 388.20                 | 5.70  | 376.85 |
| 625-13.875SS | 15.361          | .630 ±.012 | 14.101 ±.070 | 14.42624 | 390.15                 | 16.00 | 358.15 |
| 631-14.101   | 15.363          | .631 ±.012 | 14.101 ±.070 | 14.47305 | 390.20                 | 16.05 | 358.15 |
| 1-384        | 15.395          | .210 ±.005 | 14.975 ±.070 | 1.65232  | 391.05                 | 5.35  | 380.35 |
| 248-15.000   | 15.444          | .247 ±.006 | 14.950 ±.070 | 2.28766  | 392.30                 | 6.25  | 379.75 |
| 1-459        | 15.525          | .275 ±.006 | 14.975 ±.070 | 2.84561  | 394.35                 | 7.00  | 380.35 |
| 139-15.484   | 15.762          | .139 ±.004 | 15.484 ±.065 | .74479   | 400.35                 | 3.55  | 393.30 |
| 210-15.475   | 15.895          | .210 ±.005 | 15.475 ±.070 | 1.70672  | 403.75                 | 5.35  | 393.05 |
| 1-460        | 16.025          | .275 ±.006 | 15.475 ±.070 | 2.93891  | 407.05                 | 7.00  | 393.05 |
| 338-15.410   | 16.086          | .338 ±.007 | 15.410 ±.070 | 4.43914  | 408.60                 | 8.60  | 391.40 |
| 225-15.500SS | 16.100          | .227 ±.006 | 15.646 ±.070 | 2.01814  | 408.95                 | 5.75  | 397.40 |
| 1-282        | 16.233          | .139 ±.004 | 15.955 ±.075 | .76724   | 412.30                 | 3.55  | 405.25 |
| 1.000-14.430 | 16.311          | .993 ±.015 | 14.325 ±.070 | 37.26836 | 414.30                 | 25.20 | 363.85 |
| 1-385        | 16.375          | .210 ±.005 | 15.955 ±.070 | 1.75895  | 415.95                 | 5.35  | 405.25 |
| 110-16.186   | 16.406          | .110 ±.004 | 16.186 ±.075 | .48653   | 416.70                 | 2.80  | 411.15 |



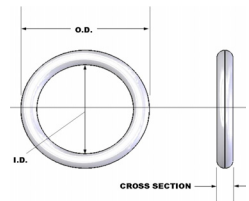
# Engineers Guide for O-Rings



| Mold IDen    | Inch Dimensions |             |              |          | Metric Dimensions (mm) |       |        |
|--------------|-----------------|-------------|--------------|----------|------------------------|-------|--------|
|              | OD              | C/S         | ID           | Volume   | OD                     | C/S   | ID     |
| 70-16.268SS  | 16.497          | .070 ±.003  | 16.357 ±.075 | .19861   | 419.00                 | 1.80  | 415.45 |
| 1-461        | 16.505          | .275 ±.006  | 15.955 ±.075 | 3.02847  | 419.25                 | 7.00  | 405.25 |
| 70-16.535    | 16.717          | .070 ±.003  | 16.577 ±.075 | .20127   | 424.60                 | 1.80  | 421.05 |
| 139-16.455   | 16.733          | .139 ±.004  | 16.455 ±.075 | .79108   | 425.00                 | 3.55  | 417.95 |
| 1-462        | 17.005          | .275 ±.006  | 16.455 ±.075 | 3.12177  | 431.95                 | 7.00  | 417.95 |
| 1-283        | 17.233          | .139 ±.004  | 16.955 ±.080 | .81492   | 437.70                 | 3.55  | 430.65 |
| 275-16.750   | 17.242          | .274 ±.006  | 16.694 ±.075 | 3.14320  | 437.95                 | 6.95  | 424.05 |
| 210-16.830   | 17.250          | .210 ±.005  | 16.830 ±.075 | 1.85416  | 438.15                 | 5.35  | 427.50 |
| 312-16.690   | 17.312          | .311 ±.006  | 16.690 ±.075 | 4.05728  | 439.75                 | 7.90  | 423.95 |
| 1-386        | 17.375          | .210 ±.005  | 16.955 ±.080 | 1.86776  | 441.35                 | 5.35  | 430.65 |
| 375-16.625   | 17.375          | .375 ±.007  | 16.625 ±.075 | 5.89863  | 441.35                 | 9.55  | 422.30 |
| 290-16.625SS | 17.418          | .294 ±.006  | 16.830 ±.075 | 3.65207  | 442.40                 | 7.45  | 427.50 |
| 1-463        | 17.505          | .275 ±.006  | 16.955 ±.080 | 3.21507  | 444.65                 | 7.00  | 430.65 |
| 139-17.455   | 17.733          | .139 ±.004  | 17.455 ±.080 | .83875   | 450.40                 | 3.55  | 443.35 |
| 1.000-15.735 | 17.735          | 1.000 ±.015 | 15.735 ±.075 | 41.29196 | 450.45                 | 25.40 | 399.65 |
| 139-17.480   | 17.758          | .139 ±.004  | 17.480 ±.080 | .83994   | 451.05                 | 3.55  | 444.00 |
| 1-464        | 18.005          | .275 ±.006  | 17.455 ±.085 | 3.30837  | 457.35                 | 7.00  | 443.35 |
| 240-17.250SS | 18.071          | .245 ±.006  | 17.581 ±.080 | 2.64013  | 459.00                 | 6.20  | 446.55 |
| 1-284        | 18.233          | .139 ±.004  | 17.955 ±.085 | .86259   | 463.10                 | 3.55  | 456.05 |
| 1-387        | 18.375          | .210 ±.005  | 17.955 ±.085 | 1.97658  | 466.75                 | 5.35  | 456.05 |
| 1-465        | 18.505          | .275 ±.006  | 17.955 ±.085 | 3.40167  | 470.05                 | 7.00  | 456.05 |
| 313-18.000   | 18.626          | .313 ±.006  | 18.000 ±.085 | 4.42678  | 473.10                 | 7.95  | 457.20 |
| 139-18.455   | 18.733          | .139 ±.004  | 18.455 ±.085 | .88643   | 475.80                 | 3.55  | 468.75 |
| 125-18.600   | 18.850          | .125 ±.004  | 18.600 ±.085 | .72191   | 478.80                 | 3.20  | 472.45 |
| 1-466        | 19.005          | .275 ±.006  | 18.455 ±.085 | 3.49497  | 482.75                 | 7.00  | 468.75 |
| 139-18.875   | 19.153          | .139 ±.004  | 18.875 ±.085 | .90645   | 486.50                 | 3.55  | 479.45 |
| 1-388        | 19.375          | .210 ±.005  | 18.955 ±.090 | 2.08539  | 492.15                 | 5.35  | 481.45 |
| 1-467        | 19.505          | .275 ±.006  | 18.955 ±.090 | 3.58826  | 495.45                 | 7.00  | 481.45 |
| 210-19.200   | 19.620          | .210 ±.005  | 19.200 ±.090 | 2.11205  | 498.35                 | 5.35  | 487.70 |
| 139-19.455   | 19.733          | .139 ±.004  | 19.455 ±.090 | .93410   | 501.20                 | 3.55  | 494.15 |
| 1-468        | 20.005          | .275 ±.006  | 19.455 ±.090 | 3.68156  | 508.15                 | 7.00  | 494.15 |
| 1-286        | 20.238          | .139 ±.004  | 19.960 ±.090 | .95817   | 514.05                 | 3.55  | 507.00 |
| 1-389        | 20.375          | .210 ±.005  | 19.955 ±.095 | 2.19420  | 517.55                 | 5.35  | 506.85 |
| 500-19.411   | 20.411          | .500 ±.010  | 19.411 ±.090 | 12.28211 | 518.45                 | 12.70 | 493.05 |
| 22-20.370    | 20.414          | .022 ±.003  | 20.370 ±.095 | .02435   | 518.50                 | .55   | 517.40 |
| 1-469        | 20.505          | .275 ±.006  | 19.955 ±.095 | 3.77486  | 520.85                 | 7.00  | 506.85 |
| 139-20.455   | 20.733          | .139 ±.004  | 20.455 ±.095 | .98177   | 526.60                 | 3.55  | 519.55 |
| 352-20.126   | 20.802          | .352 ±.007  | 20.098 ±.095 | 6.25199  | 528.35                 | 8.95  | 510.50 |
| 346-20.125   | 20.817          | .346 ±.007  | 20.125 ±.095 | 6.04688  | 528.75                 | 8.80  | 511.20 |
| 197-20.669   | 20.992          | .196 ±.005  | 20.600 ±.095 | 1.97120  | 533.20                 | 5.00  | 523.25 |
| 197-20.670   | 20.993          | .196 ±.005  | 20.601 ±.095 | 1.97130  | 533.20                 | 5.00  | 523.25 |
| 70-20.840SS  | 21.219          | .071 ±.003  | 21.077 ±.095 | .26304   | 538.95                 | 1.80  | 535.35 |
| 124-21.000   | 21.248          | .124 ±.004  | 21.000 ±.095 | .80142   | 539.70                 | 3.15  | 533.40 |
| 197-20.669VS | 21.334          | .199 ±.005  | 20.936 ±.095 | 2.06513  | 541.90                 | 5.05  | 531.80 |



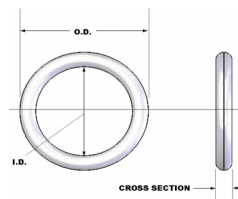
# Engineers Guide for O-Rings



| Mold IDen           | Inch Dimensions |            |              |         | Metric Dimensions (mm) |      |        |
|---------------------|-----------------|------------|--------------|---------|------------------------|------|--------|
|                     | OD              | C/S        | ID           | Volume  | OD                     | C/S  | ID     |
| <b>1-390</b>        | 21.375          | .210 ±.005 | 20.955 ±.095 | 2.30301 | 542.95                 | 5.35 | 532.25 |
| <b>1-470</b>        | 21.505          | .275 ±.006 | 20.955 ±.095 | 3.96146 | 546.25                 | 7.00 | 532.25 |
| <b>70-21.270SS</b>  | 21.654          | .071 ±.003 | 21.512 ±.095 | .26845  | 550.00                 | 1.80 | 546.40 |
| <b>139-21.455</b>   | 21.733          | .139 ±.004 | 21.455 ±.095 | 1.02944 | 552.00                 | 3.55 | 544.95 |
| <b>139-21.800SS</b> | 22.294          | .140 ±.004 | 22.014 ±.100 | 1.07139 | 566.25                 | 3.55 | 559.15 |
| <b>1-391</b>        | 22.373          | .210 ±.005 | 21.955 ±.095 | 2.41161 | 568.30                 | 5.35 | 557.65 |
| <b>1-471</b>        | 22.505          | .275 ±.006 | 21.955 ±.100 | 4.14806 | 571.65                 | 7.00 | 557.65 |
| <b>212-22.106</b>   | 22.530          | .212 ±.006 | 22.106 ±.100 | 2.47495 | 572.25                 | 5.40 | 561.50 |
| <b>1-392</b>        | 23.360          | .210 ±.005 | 22.940 ±.105 | 2.51901 | 593.35                 | 5.35 | 582.70 |
| <b>1-472</b>        | 23.490          | .275 ±.006 | 22.940 ±.105 | 4.33185 | 596.65                 | 7.00 | 582.70 |
| <b>210-22.940VS</b> | 23.602          | .212 ±.005 | 23.178 ±.105 | 2.59383 | 599.50                 | 5.40 | 588.70 |
| <b>277-23.098</b>   | 23.652          | .277 ±.006 | 23.098 ±.105 | 4.42538 | 600.75                 | 7.05 | 586.70 |
| <b>1-393</b>        | 24.360          | .210 ±.005 | 23.940 ±.110 | 2.62782 | 618.75                 | 5.35 | 608.10 |
| <b>1-473</b>        | 24.490          | .275 ±.006 | 23.940 ±.110 | 4.51845 | 622.05                 | 7.00 | 608.10 |
| <b>212-24.104</b>   | 24.528          | .212 ±.006 | 24.104 ±.110 | 2.69652 | 623.00                 | 5.40 | 612.25 |
| <b>212-24.188</b>   | 24.612          | .212 ±.005 | 24.188 ±.110 | 2.70583 | 625.15                 | 5.40 | 614.40 |
| <b>210-24.625</b>   | 25.045          | .210 ±.005 | 24.625 ±.110 | 2.70236 | 636.15                 | 5.35 | 625.50 |
| <b>1-394</b>        | 25.360          | .210 ±.005 | 24.940 ±.115 | 2.73663 | 644.15                 | 5.35 | 633.50 |
| <b>1-474</b>        | 25.490          | .275 ±.006 | 24.940 ±.115 | 4.70505 | 647.45                 | 7.00 | 633.50 |
| <b>70-25.570SS</b>  | 25.952          | .071 ±.003 | 25.810 ±.110 | .32191  | 659.20                 | 1.80 | 655.60 |
| <b>250-25.375VS</b> | 26.118          | .252 ±.006 | 25.614 ±.115 | 4.05294 | 663.40                 | 6.40 | 650.60 |
| <b>210-25.580VS</b> | 26.270          | .212 ±.005 | 25.846 ±.115 | 2.88970 | 667.25                 | 5.40 | 656.50 |
| <b>340-25.275VS</b> | 26.287          | .344 ±.007 | 25.599 ±.110 | 7.57490 | 667.70                 | 8.75 | 650.20 |
| <b>1-395</b>        | 26.360          | .210 ±.005 | 25.940 ±.120 | 2.84544 | 669.55                 | 5.35 | 658.90 |
| <b>1-475</b>        | 26.490          | .275 ±.006 | 25.940 ±.120 | 4.89165 | 672.85                 | 7.00 | 658.90 |
| <b>341-25.984</b>   | 26.524          | .339 ±.007 | 25.846 ±.110 | 7.42492 | 673.70                 | 8.60 | 656.50 |
| <b>212-26.209</b>   | 26.633          | .212 ±.005 | 26.209 ±.120 | 2.92995 | 676.50                 | 5.40 | 665.70 |
| <b>210-26.940</b>   | 27.360          | .210 ±.005 | 26.940 ±.120 | 2.95426 | 694.95                 | 5.35 | 684.30 |
| <b>1-396</b>        | 27.360          | .210 ±.005 | 26.940 ±.120 | 2.95426 | 694.95                 | 5.35 | 684.30 |
| <b>1-476</b>        | 27.505          | .275 ±.006 | 26.955 ±.120 | 5.08104 | 698.65                 | 7.00 | 684.65 |
| <b>275-27.485</b>   | 28.035          | .275 ±.006 | 27.485 ±.120 | 5.17994 | 712.10                 | 7.00 | 698.10 |
| <b>375-27.250VS</b> | 28.153          | .377 ±.007 | 27.399 ±.120 | 9.74074 | 715.10                 | 9.60 | 695.95 |
| <b>139-27.750SS</b> | 28.571          | .140 ±.004 | 28.291 ±.120 | 1.37495 | 725.70                 | 3.55 | 718.60 |
| <b>275-28.801</b>   | 29.351          | .275 ±.006 | 28.801 ±.130 | 5.42550 | 745.50                 | 7.00 | 731.55 |
| <b>275-29.331ES</b> | 30.072          | .276 ±.006 | 29.520 ±.130 | 5.60036 | 763.85                 | 7.00 | 749.80 |
| <b>210-29.880VS</b> | 30.614          | .212 ±.005 | 30.190 ±.140 | 3.37143 | 777.60                 | 5.40 | 766.85 |



# Engineers Guide for O-Rings





3800 North Washington Ave.  
Minneapolis, MN 55412-2142

Toll Free: 1-800-394-6590

612-333-7464

Sales: 612-334-9190

FAX: 612-342-2417

[Info@PrecisionAssociates.com](mailto:Info@PrecisionAssociates.com)

Ask us about our complete line of product literature:

- ***O-Rings***
- ***U-Cups***
- ***V-Rings***
- ***X-Rings***
- ***Rod Wipers***
- ***Multiseal<sup>®</sup> Low Friction Seals***
- ***Kurv-Bak<sup>™</sup> Hard Rubber Back-Up Rings***
- ***Rubber Balls***
- ***Custom Moldings***
- ***Medical Seals***

After 57 years in the rubber business, we've learned to be flexible. We'll bend over backwards to design custom solutions that meet your needs *precisely*. PAI is the company you can trust for rubber seal solutions YOUR WAY!

- **Over 1,000 different compounds**
- **More than 2,400 O-Ring sizes**
- **Custom molding**
- **ISO 14644-1 Class 7 Clean Room**
- **99% on-time delivery**
- **In-house Mold Shop**

[www.PrecisionAssoc.com](http://www.PrecisionAssoc.com)