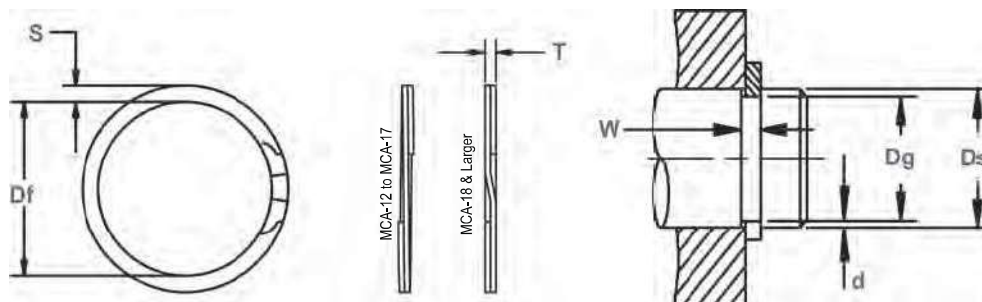




# MCA Anillos en Espiral de Eje

**Externo, Aeroespacial Métrico**  
Dimensiones conformes a las especificaciones Aeroespacial  
Métrico MA 4016.

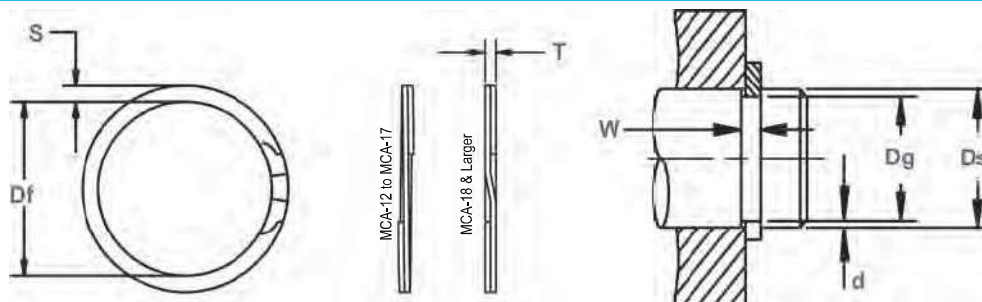


Diámetro libre y las mediciones del anillo

Diámetro del eje y dimensiones de las ranuras

| No. DE ANILLO | EJE DIAMETRO (mm) | TAMANO DE RANURA |        |         |                |                | TAMANO DEL ANILLO |                |         |      |         |        | CARGA DE EMPUJE (N)             |                                 |       |
|---------------|-------------------|------------------|--------|---------|----------------|----------------|-------------------|----------------|---------|------|---------|--------|---------------------------------|---------------------------------|-------|
|               |                   | DIAMETRO         |        | ANCHURA |                |                | DIAMETRO LIBRE    |                | ESPESOR |      | SECCION |        | FACTOR DE SEGURIDAD DE ANILLO 3 | FACTOR DE SEGURIDAD DE RANURA 2 |       |
|               |                   | Ds               | Dg     | Tol.    | W              | Tol.           | Df                | Tol.           | T       | Tol. | S       | Tol.   |                                 |                                 |       |
| MCA-12        | 12                | 11.29            | ±0.06  | 0.70    |                | 11.18          |                   | 0.60           |         | 1.14 |         | 7,950  | 2,100                           |                                 |       |
| MCA-13        | 13                | 12.24            |        | 1.00    |                | 12.13          |                   | 0.89           |         | 1.27 |         | 12,100 | 2,410                           |                                 |       |
| MCA-14        | 14                | 13.19            |        | 1.00    |                | 13.06          |                   | 0.89           |         | 1.27 |         | 13,040 | 2,800                           |                                 |       |
| MCA-15        | 15                | 14.09            |        | 1.00    |                | 13.98          |                   | 0.89           |         | 1.27 |         | 13,970 | 3,360                           |                                 |       |
| MCA-16        | 16                | 15.02            |        | 1.00    |                | 14.90          |                   | 0.89           |         | 1.40 |         | 14,900 | 3,820                           |                                 |       |
| MCA-17        | 17                | 16.02            |        | 1.00    |                | 15.82          |                   | 0.89           |         | 1.40 |         | 15,830 | 4,060                           |                                 |       |
| MCA-18        | 18                | 16.92            |        | 1.20    |                | +0.08<br>-0.00 |                   | 16.80          |         | 1.07 |         | 1.65   | 20,150                          | 4,730                           |       |
| MCA-19        | 19                | 17.87            |        | 1.20    |                |                |                   | 17.73          |         | 1.07 |         | 1.65   | 21,270                          | 5,270                           |       |
| MCA-20        | 20                | 18.77            | ±0.075 | 1.20    |                | 18.62          |                   | 1.07           |         | 1.65 |         | 22,390 | 6,040                           |                                 |       |
| MCA-21        | 21                | 19.72            |        | 1.20    |                | 19.57          |                   | 1.07           |         | 1.65 |         | 23,510 | 6,550                           |                                 |       |
| MCA-22        | 22                | 20.62            |        | 1.20    |                | 20.45          |                   | +0.00<br>-0.33 |         | 1.07 |         | ±0.05  | 1.91                            | 24,630                          | 7,390 |
| MCA-23        | 23                | 21.57            |        | 1.20    |                | 21.39          |                   | 1.07           |         | 1.91 |         |        | 25,750                          | 8,070                           |       |
| MCA-24        | 24                | 22.52            |        | 1.20    |                | 22.35          |                   | 1.07           |         | 1.91 |         | 26,870 | 8,650                           |                                 |       |
| MCA-25        | 25                | 23.42            |        | 1.20    |                | 23.25          |                   | 1.07           |         | 2.16 |         | 27,990 | 9,620                           |                                 |       |
| MCA-26        | 26                | 24.42            |        | 1.20    |                | 24.21          |                   | 1.07           |         | 2.16 |         | 29,110 | 10,000                          |                                 |       |
| MCA-27        | 27                | 25.35            |        | 1.40    |                | 25.04          |                   | 1.27           |         | 2.64 |         | 31,170 | 10,910                          |                                 |       |
| MCA-28        | 28                | 26.30            |        | 1.40    |                | 26.00          |                   | 1.27           |         | 2.64 |         | 32,330 | 11,590                          |                                 |       |
| MCA-29        | 29                | 27.27            |        | 1.40    |                | 26.95          |                   | 1.27           |         | 2.64 |         | 33,480 | 12,290                          |                                 |       |
| MCA-30        | 30                | 28.25            |        | 1.40    |                | 27.92          |                   | 1.27           |         | 2.64 |         | 34,640 | 12,860                          |                                 |       |
| MCA-31        | 31                | 29.17            |        | 1.40    |                | 28.84          |                   | 1.27           |         | 2.64 |         | 35,790 | 13,890                          |                                 |       |
| MCA-32        | 32                | 30.09            | ±0.10  | 1.40    |                | 29.77          |                   | 1.27           |         | 2.64 | ±0.10   | 36,950 | 14,960                          |                                 |       |
| MCA-34        | 34                | 31.90            |        | 1.40    |                | 31.54          |                   | 1.27           |         | 3.00 |         | 39,260 | 17,390                          |                                 |       |
| MCA-35        | 35                | 32.80            |        | 1.40    |                | 32.44          |                   | 1.27           |         | 3.00 |         | 40,410 | 18,750                          |                                 |       |
| MCA-36        | 36                | 33.75            |        | 1.40    |                | 33.40          |                   | 1.27           |         | 3.00 |         | 41,560 | 19,810                          |                                 |       |
| MCA-37        | 37                | 34.67            |        | 1.40    |                | 34.24          |                   | 1.27           |         | 3.00 |         | 42,720 | 21,080                          |                                 |       |
| MCA-38        | 38                | 35.66            |        | 1.40    |                | 35.18          |                   | 1.27           |         | 3.00 |         | 43,870 | 21,650                          |                                 |       |
| MCA-40        | 40                | 37.55            |        | 1.75    |                | 37.15          |                   | 1.57           |         | 3.25 |         | 57,090 | 23,960                          |                                 |       |
| MCA-42        | 42                | 39.45            |        | 1.75    |                | 39.02          |                   | 1.57           |         | 3.25 |         | 59,990 | 26,180                          |                                 |       |
| MCA-45        | 45                | 42.25            |        | 1.75    | +0.10<br>-0.00 | 41.77          |                   | 1.57           |         | 3.25 | ±0.075  | 64,230 | 30,240                          |                                 |       |
| MCA-46        | 46                | 43.15            |        | 1.75    |                | 42.67          |                   | +0.00<br>-0.51 |         | 1.57 |         | 3.25   | 65,660                          | 32,040                          |       |
| MCA-47        | 47                | 44.31            |        | 1.75    |                | 43.81          |                   | 1.57           |         | 4.01 |         | 67,080 | 30,900                          |                                 |       |
| MCA-48        | 48                | 45.05            |        | 1.75    |                | 44.48          |                   | 1.57           |         | 4.01 |         | 68,510 | 34,600                          |                                 |       |
| MCA-50        | 50                | 47.05            | ±0.15  | 1.75    |                | 46.69          |                   | 1.57           |         | 4.01 |         | 71,370 | 36,040                          |                                 |       |
| MCA-52        | 52                | 50.15            |        | 1.42    |                | 49.62          |                   | 1.25           |         | 3.25 |         | 59,090 | 23,550                          |                                 |       |
| MCA-53        | 53                | 51.15            |        | 1.42    |                | 50.62          |                   | 1.25           |         | 3.25 |         | 60,230 | 24,000                          |                                 |       |
| MCA-54        | 54                | 52.15            |        | 1.42    |                | 51.62          |                   | 1.25           |         | 3.25 |         | 61,370 | 24,460                          |                                 |       |
| MCA-55        | 55                | 53.15            |        | 1.42    |                | 52.62          |                   | 1.25           |         | 3.51 | ±0.08   | 62,500 | 24,910                          |                                 |       |
| MCA-56        | 56                | 54.15            |        | 1.42    |                | 53.62          |                   | 1.25           |         | 3.51 |         | 63,640 | 25,370                          |                                 |       |
| MCA-58        | 58                | 56.01            |        | 1.42    |                | 55.43          |                   | 1.25           |         | 3.51 |         | 65,910 | 28,250                          |                                 |       |
| MCA-59        | 59                | 57.01            |        | 1.42    |                | 56.43          |                   | 1.25           |         | 3.51 |         | 67,050 | 28,730                          |                                 |       |
| MCA-60        | 60                | 58.01            |        | 1.42    | +0.00<br>-0.63 | 57.43          |                   | 1.25           |         | 3.51 |         | 68,180 | 29,220                          |                                 |       |
| MCA-61        | 61                | 58.91            |        | 1.42    |                | 58.36          |                   | 1.25           |         | 3.51 |         | 69,320 | 31,190                          |                                 |       |
| MCA-62        | 62                | 59.91            |        | 1.42    |                | 59.30          |                   | 1.25           |         | 3.76 |         | 70,460 | 31,710                          |                                 |       |
| MCA-63        | 63                | 60.91            |        | 1.42    |                | 60.30          |                   | 1.25           |         | 3.76 |         | 71,590 | 32,220                          |                                 |       |
| MCA-64        | 64                | 61.91            |        | 1.42    |                | 61.25          |                   | 1.25           |         | 3.76 |         | 72,730 | 32,730                          |                                 |       |

Dimensiones en milímetros a menos que se indique lo contrario.



Diámetro libre y las mediciones del anillo

Diámetro del eje y dimensiones de las ranuras

| No. DE ANILLO | EJE DIAMETRO (mm) | TAMANO DE RANURA |    |         |      | TAMANO DEL ANILLO |        |         |      |         |      | CARGA DE EMPUJE (N)             |                                 |
|---------------|-------------------|------------------|----|---------|------|-------------------|--------|---------|------|---------|------|---------------------------------|---------------------------------|
|               |                   | DIAMETRO         |    | ANCHURA |      | DIAMETRO LIBRE    |        | ESPESOR |      | SECCION |      | FACTOR DE SEGURIDAD DE ANILLO 3 | FACTOR DE SEGURIDAD DE RANURA 2 |
|               |                   | Ds               | Dg | Tol.    | W    | Tol.              | DI     | Tol.    | T    | Tol.    | S    |                                 |                                 |
| MCA-65        | 65                | 62.81            |    |         | 1.42 |                   | 62.20  |         | 1.25 |         | 3.76 | 73,870                          | 34,820                          |
| MCA-66        | 66                | 63.79            |    |         | 1.42 |                   | 63.16  | +0.00   | 1.25 |         | 3.76 | 75,000                          | 35,680                          |
| MCA-67        | 67                | 64.71            |    |         | 1.42 |                   | 64.16  | -0.63   | 1.25 |         | 3.76 | 76,140                          | 37,530                          |
| MCA-68        | 68                | 65.71            |    |         | 1.42 |                   | 65.08  |         | 1.25 |         | 4.01 | 77,270                          | 38,090                          |
| MCA-69        | 69                | 66.71            |    |         | 1.42 |                   | 66.06  |         | 1.25 |         | 4.01 | 78,410                          | 38,650                          |
| MCA-70        | 70                | 67.71            |    |         | 1.42 |                   | 67.08  |         | 1.25 |         | 4.01 | 79,550                          | 39,210                          |
| MCA-71        | 71                | 68.71            |    |         | 1.42 |                   | 68.04  |         | 1.25 |         | 4.01 | 80,680                          | 39,770                          |
| MCA-72        | 72                | 69.65            |    |         | 1.42 |                   | 69.00  |         | 1.25 |         | 4.27 | 81,820                          | 41,380                          |
| MCA-75        | 75                | 72.61            |    |         | 1.42 |                   | 71.93  |         | 1.25 |         | 4.27 | 85,230                          | 43,830                          |
| MCA-78        | 78                | 75.55            |    |         | 1.73 |                   | 74.84  | +0.00   | 1.55 |         | 4.27 | 109,910                         | 46,730                          |
| MCA-80        | 80                | 77.51            |    |         | 1.73 |                   | 76.80  | -0.76   | 1.55 |         | 4.52 | 112,730                         | 48,700                          |
| MCA-82        | 82                | 79.45            |    |         | 1.73 |                   | 78.72  |         | 1.55 |         | 4.52 | 115,550                         | 51,120                          |
| MCA-85        | 85                | 82.35            |    |         | 1.73 |                   | 81.62  |         | 1.55 |         | 4.78 | 119,780                         | 55,060                          |
| MCA-88        | 88                | 85.31            |    |         | 1.73 |                   | 84.53  |         | 1.55 |         | 4.78 | 124,000                         | 57,860                          |
| MCA-90        | 90                | 87.21            |    |         | 1.73 |                   | 86.43  |         | 1.55 |         | 5.03 | 126,820                         | 61,370                          |
| MCA-95        | 95                | 92.15            |    |         | 1.73 |                   | 91.37  |         | 1.55 |         | 5.03 | 133,870                         | 66,160                          |
| MCA-100       | 100               | 97.01            |    |         | 1.73 |                   | 96.10  |         | 1.55 |         | 5.28 | 140,910                         | 73,050                          |
| MCA-105       | 105               | 101.85           |    |         | 1.73 |                   | 100.94 |         | 1.55 |         | 5.54 | 147,960                         | 80,780                          |
| MCA-110       | 110               | 106.69           |    |         | 1.73 |                   | 105.75 |         | 1.55 |         | 5.79 | 155,000                         | 88,930                          |
| MCA-115       | 115               | 111.55           |    |         | 1.73 |                   | 110.59 | +0.00   | 1.55 |         | 6.05 | 162,050                         | 96,890                          |
| MCA-120       | 120               | 116.45           |    |         | 2.00 |                   | 115.49 | -1.00   | 1.83 |         | 6.35 | 199,640                         | 104,030                         |
| MCA-125       | 125               | 121.45           |    |         | 2.00 |                   | 120.44 |         | 1.83 |         | 6.35 | 207,960                         | 108,360                         |
| MCA-130       | 130               | 126.35           |    |         | 2.00 |                   | 125.34 |         | 1.83 |         | 6.35 | 216,280                         | 115,860                         |
| MCA-135       | 135               | 131.27           |    |         | 2.00 |                   | 130.20 |         | 1.83 |         | 6.35 | 224,600                         | 122,950                         |
| MCA-140       | 140               | 136.25           |    |         | 2.00 |                   | 135.14 |         | 1.83 |         | 6.35 | 232,920                         | 128,190                         |
| MCA-145       | 145               | 141.17           |    |         | 2.00 |                   | 140.00 | +0.00   | 1.83 |         | 6.35 | 241,230                         | 135,590                         |
| MCA-150       | 150               | 146.17           |    |         | 2.00 |                   | 145.00 | -1.30   | 1.83 |         | 6.35 | 249,550                         | 140,260                         |
| MCA-155       | 155               | 150.60           |    |         | 2.40 |                   | 149.33 |         | 2.18 |         | 7.92 | 307,190                         | 166,080                         |
| MCA-160       | 160               | 155.60           |    |         | 2.40 |                   | 154.31 |         | 2.18 |         | 7.92 | 317,100                         | 171,430                         |
| MCA-165       | 165               | 160.60           |    |         | 2.40 |                   | 159.23 |         | 2.18 |         | 7.92 | 327,010                         | 176,790                         |
| MCA-170       | 170               | 165.40           |    |         | 2.40 |                   | 164.00 |         | 2.18 |         | 7.92 | 336,920                         | 190,430                         |
| MCA-175       | 175               | 170.40           |    |         | 2.40 |                   | 169.00 | +0.00   | 2.18 |         | 7.92 | 346,830                         | 196,030                         |
| MCA-180       | 180               | 175.20           |    |         | 2.40 |                   | 173.78 | -1.52   | 2.18 |         | 7.92 | 356,740                         | 210,400                         |
| MCA-185       | 185               | 180.20           |    |         | 2.40 |                   | 178.70 |         | 2.18 |         | 7.92 | 366,650                         | 216,240                         |
| MCA-190       | 190               | 185.20           |    |         | 2.40 |                   | 183.70 |         | 2.18 |         | 7.92 | 376,560                         | 220,080                         |
| MCA-195       | 195               | 190.00           |    |         | 2.40 |                   | 188.43 |         | 2.18 |         | 7.92 | 386,460                         | 237,420                         |
| MCA-200       | 200               | 195.00           |    |         | 2.40 |                   | 193.43 |         | 2.18 |         | 7.92 | 396,370                         | 243,510                         |
| MCA-210       | 210               | 204.60           |    |         | 2.40 |                   | 202.93 |         | 2.18 |         | 9.53 | 416,190                         | 276,140                         |
| MCA-220       | 220               | 214.40           |    |         | 2.40 |                   | 212.65 |         | 2.18 |         | 9.53 | 436,010                         | 300,010                         |
| MCA-230       | 230               | 224.40           |    |         | 2.40 |                   | 222.60 | +0.00   | 2.18 |         | 9.53 | 455,830                         | 313,640                         |
| MCA-240       | 240               | 234.20           |    |         | 2.40 |                   | 232.32 | -1.78   | 2.18 |         | 9.53 | 475,650                         | 328,970                         |
| MCA-250       | 250               | 243.80           |    |         | 2.40 |                   | 241.83 |         | 2.18 |         | 9.53 | 495,470                         | 377,440                         |
| MCA-260       | 260               | 253.60           |    |         | 2.40 |                   | 251.57 |         | 2.18 |         | 9.53 | 515,290                         | 405,210                         |
| MCA-270       | 270               | 263.40           |    |         | 2.40 |                   | 261.30 |         | 2.18 |         | 9.53 | 535,100                         | 433,940                         |
| MCA-280       | 280               | 273.20           |    |         | 2.40 |                   | 271.04 |         | 2.18 |         | 9.53 | 554,920                         | 463,650                         |

Dimensiones en milímetros a menos que se indique lo contrario.