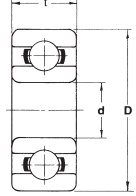


Miniature Ball Bearings

MR Series*

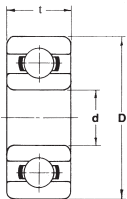
Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| MR31 | L-310W51 | 1.0 | 3.0 | 1.5 | 74 | 20 | 130 | 150 | 0.05 |
| MR41X | R-412 | 1.2 | 4.0 | 1.8 | 108 | 34 | 110 | 130 | 0.10 |
| MR52 | L-520W02 | 2.0 | 5.0 | 2.0 | 167 | 49 | 85 | 100 | 0.14 |
| MR62 | R-620W52 | 2.0 | 6.0 | 2.5 | 334 | 98 | 75 | 90 | 0.28 |
| MR72 | R-720Y52 | 2.0 | 7.0 | 2.5 | 383 | 128 | 63 | 75 | 0.43 |
| MR82X | R-825Y52 | 2.5 | 8.0 | 2.5 | 559 | 177 | 60 | 67 | 0.52 |
| MR63 | L-630 | 3.0 | 6.0 | 2.0 | 206 | 74 | 71 | 80 | 0.20 |
| MR83 | R-830Y52 | 3.0 | 8.0 | 2.5 | 392 | 137 | 60 | 67 | 0.51 |
| MR93 | R-930Y52 | 3.0 | 9.0 | 2.5 | 569 | 186 | 56 | 67 | 0.75 |
| MR74 | L-740 | 4.0 | 7.0 | 2.0 | 314 | 118 | 60 | 67 | 0.23 |
| MR84 | L-840 | 4.0 | 8.0 | 2.0 | 392 | 137 | 56 | 67 | 0.39 |
| MR104 | L-1040 | 4.0 | 10.0 | 3.0 | 589 | 206 | 48 | 56 | 0.95 |
| MR85 | L-850 | 5.0 | 8.0 | 2.0 | 304 | 118 | 53 | 63 | 0.25 |
| MR95 | L-950 | 5.0 | 9.0 | 2.5 | 432 | 167 | 50 | 60 | 0.54 |
| MR105 | L-1050 | 5.0 | 10.0 | 3.0 | 432 | 167 | 50 | 60 | 0.91 |
| MR106 | L-1060 | 6.0 | 10.0 | 2.5 | 500 | 216 | 45 | 53 | 0.55 |
| MR126 | L-1260 | 6.0 | 12.0 | 3.0 | 716 | 294 | 43 | 50 | 1.25 |
| MR117 | L-1170 | 7.0 | 11.0 | 2.5 | 451 | 206 | 43 | 50 | 0.59 |
| MR137 | L-1370 | 7.0 | 13.0 | 3.0 | 540 | 275 | 40 | 48 | 1.52 |
| MR128 | L-1280 | 8.0 | 12.0 | 2.5 | 540 | 275 | 40 | 48 | 0.70 |
| MR148 | L-1480 | 8.0 | 14.0 | 3.5 | 814 | 383 | 38 | 45 | 1.90 |

* All Bearings are available with stainless steel 440C

600 Series* Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 601X | R-615 | 1.5 | 6 | 2.5 | 334 | 98 | 75 | 90 | 0.31 |
| 602 | R-725 | 2.0 | 7 | 2.8 | 383 | 128 | 60 | 71 | 0.50 |
| 602X | R-825 | 2.5 | 8 | 2.8 | 549 | 177 | 60 | 71 | 0.61 |
| 603 | R-930 | 3.0 | 9 | 3.0 | 569 | 186 | 56 | 67 | 0.84 |
| 604 | R-1240 | 4.0 | 12 | 4.0 | 961 | 353 | 48 | 56 | 2.19 |
| 605 | R-1450 | 5.0 | 14 | 5.0 | 1334 | 510 | 40 | 50 | 3.46 |
| 606 | R-1760 | 6.0 | 17 | 6.0 | 2266 | 844 | 38 | 45 | 5.94 |
| 607 | R-1970 | 7.0 | 19 | 6.0 | 2335 | 893 | 36 | 43 | 7.80 |
| 608 | R-2280 | 8.0 | 22 | 7.0 | 3296 | 1383 | 34 | 40 | 11.80 |
| 609 | — | 9.0 | 24 | 7.0 | 3335 | 1422 | 32 | 38 | 14.70 |

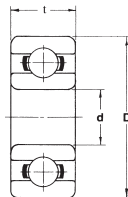
* All Bearings are available with stainless steel 440C

620 Series* Open

| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 623 | R-1030 | 3 | 10 | 4 | 627.8 | 215.8 | 50 | 60 | 1.45 |
| 624 | R-1340 | 4 | 13 | 5 | 1305 | 490.5 | 40 | 48 | 3.10 |
| 625 | R-1650 | 5 | 16 | 5 | 1727 | 676.9 | 36 | 43 | 4.95 |
| 626 | R-1960 | 6 | 19 | 6 | 2335 | 892.7 | 32 | 40 | 8.12 |
| 627 | R-2270 | 7 | 22 | 7 | 3286 | 1383 | 30 | 36 | 12.70 |
| 628 | — | 8 | 24 | 8 | 3335 | 1422 | 28 | 34 | 17.10 |
| 629 | R-2690 | 9 | 26 | 8 | 4571 | 1982 | 28 | 34 | 19.00 |

* All Bearings are available with stainless steel 440C

630 Series* Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 633 | – | 3 | 13 | 5 | 1305 | 490.5 | 40 | 48 | 3.27 |
| 634 | R-1640 | 4 | 16 | 5 | 1344 | 519.9 | 36 | 43 | 5.24 |
| 635 | – | 5 | 19 | 6 | 2335 | 892.7 | 32 | 40 | 8.50 |
| 636 | – | 6 | 22 | 7 | 3335 | 1422 | 30 | 36 | 13.90 |
| 637 | – | 7 | 26 | 9 | 4571 | 1982 | 28 | 34 | 24.20 |
| 638 | – | 8 | 28 | 9 | 4571 | 1982 | 28 | 34 | 28.10 |
| 639 | – | 9 | 30 | 10 | 4660 | 2080 | 24 | 30 | 36.20 |

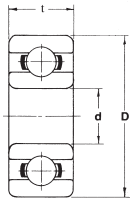
* All Bearings are available with stainless steel 440C

680 Series* Open

| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 681 | L-310 | 1.0 | 3 | 1.0 | 74 | 20 | 130 | 150 | 0.03 |
| 681X | L-415 | 1.5 | 4 | 1.2 | 108 | 34 | 100 | 120 | 0.10 |
| 682 | L-520 | 2.0 | 5 | 1.5 | 167 | 49 | 85 | 100 | 0.15 |
| 682X | L-625 | 2.5 | 6 | 1.8 | 186 | 59 | 71 | 80 | 0.20 |
| 683 | L-730 | 3.0 | 7 | 2.0 | 314 | 108 | 63 | 75 | 0.32 |
| 684 | L-940 | 4.0 | 9 | 2.5 | 638 | 226 | 53 | 63 | 0.65 |
| 685 | L-1150 | 5.0 | 11 | 3.0 | 716 | 294 | 45 | 53 | 1.16 |
| 686 | L-1360 | 6.0 | 13 | 3.5 | 1079 | 441 | 40 | 50 | 1.87 |
| 687 | L-1470 | 7.0 | 14 | 3.5 | 1177 | 510 | 40 | 50 | 2.03 |
| 688 | L-1680 | 8.0 | 16 | 4.0 | 1256 | 589 | 36 | 43 | 3.11 |
| 689 | L-1790 | 9.0 | 17 | 4.0 | 1324 | 667 | 36 | 43 | 3.41 |

* All Bearings are available with stainless steel 440C

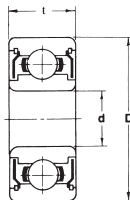
690 Series* Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 691 | R-410 | 1.0 | 4 | 1.6 | 137 | 39.2 | 100 | 120 | 0.11 |
| 691X | R-515 | 1.5 | 5 | 2.0 | 167 | 49.1 | 85 | 100 | 0.20 |
| 692 | R-620 | 2.0 | 6 | 2.3 | 334 | 98.1 | 75 | 90 | 0.28 |
| 692X | R-725 | 2.5 | 7 | 2.5 | 383 | 128 | 63 | 75 | 0.40 |
| 693 | R-830 | 3.0 | 8 | 3.0 | 559 | 177 | 60 | 67 | 0.60 |
| 694 | R-1140 | 4.0 | 11 | 4.0 | 961 | 353 | 48 | 56 | 1.69 |
| 695 | R-1350 | 5.0 | 13 | 4.0 | 1079 | 432 | 43 | 50 | 2.39 |
| 696 | R-1560 | 6.0 | 15 | 5.0 | 1344 | 520 | 40 | 45 | 3.85 |
| 697 | – | 7.0 | 17 | 5.0 | 1609 | 716 | 36 | 43 | 5.26 |
| 698 | – | 8.0 | 19 | 6.0 | 2237 | 922 | 36 | 43 | 7.12 |
| 699 | L-2090 | 9.0 | 20 | 6.0 | 2472 | 1079 | 34 | 40 | 3.38 |

* All Bearings are available with stainless steel 440C

MR Series* Double Shielded

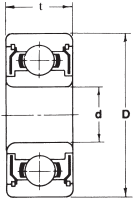


Miniature Ball Bearings

| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| MR41XZZ | – | 1.2 | 4 | 2.5 | 108 | 34 | 110 | 130 | 0.14 |
| MR52ZZ | L-520ZZW52 | 2.0 | 5 | 2.5 | 167 | 49 | 85 | 100 | 0.20 |
| MR62ZZ | R-620ZZY52 | 2.0 | 6 | 2.5 | 334 | 98 | 75 | 90 | 0.33 |
| MR72ZZ | R-720ZZY03 | 2.0 | 7 | 3.0 | 383 | 128 | 63 | 75 | 0.53 |
| MR63ZZ | L-630ZZ | 3.0 | 6 | 2.5 | 206 | 74 | 71 | 80 | 0.28 |
| MR83ZZ | – | 3.0 | 8 | 3.0 | 392 | 137 | 60 | 67 | 0.67 |
| MR93ZZ | R-930ZZY04 | 3.0 | 9 | 4.0 | 569 | 186 | 56 | 67 | 1.15 |
| MR74ZZ | L-740ZZ | 4.0 | 7 | 2.5 | 255 | 108 | 60 | 67 | 0.33 |
| MR84ZZ | L-840ZZ | 4.0 | 8 | 3.0 | 392 | 137 | 56 | 67 | 0.56 |
| MR104ZZ | L-1040ZZ | 4.0 | 10 | 4.0 | 589 | 206 | 48 | 56 | 1.33 |
| MR85ZZ | L-850ZZ | 5.0 | 8 | 2.5 | 216 | 88 | 53 | 63 | 0.34 |
| MR95ZZ | L-950ZZ | 5.0 | 9 | 3.0 | 432 | 167 | 50 | 60 | 0.58 |
| MR105ZZ | L-1050ZZ | 5.0 | 10 | 4.0 | 432 | 167 | 50 | 60 | 1.26 |
| MR115ZZ | – | 5.0 | 11 | 4.0 | 716 | 294 | 45 | 53 | 0.62 |
| MR106ZZ | L-1060ZZ | 6.0 | 10 | 3.0 | 500 | 216 | 45 | 53 | 0.70 |
| MR126ZZ | L-1260ZZ | 6.0 | 12 | 4.0 | 716 | 294 | 43 | 50 | 1.66 |
| MR117ZZ | L-1170ZZ | 7.0 | 11 | 3.0 | 451 | 206 | 43 | 50 | 0.71 |
| MR137ZZ | L-1370ZZ | 7.0 | 13 | 4.0 | 540 | 275 | 40 | 48 | 2.01 |
| MR128ZZ | L-1280ZZ | 8.0 | 12 | 3.5 | 540 | 275 | 40 | 48 | 0.99 |
| MR148ZZ | L-1480ZZ | 8.0 | 14 | 4.0 | 814 | 383 | 38 | 45 | 2.19 |

* All Bearings are available with stainless steel 440C

600 Series* Double Shielded



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 601XZZ | R-615ZZ | 1.5 | 6 | 3.0 | 334 | 98 | 75 | 90 | 0.40 |
| 602ZZ | R-720ZZ | 2.0 | 7 | 3.5 | 383 | 128 | 60 | 71 | 0.60 |
| 620XZZ | R-825ZZ | 2.5 | 8 | 4.0 | 549 | 177 | 60 | 71 | 0.85 |
| 603ZZ | R-930ZZ | 3.0 | 9 | 5.0 | 569 | 186 | 56 | 67 | 1.43 |
| 604ZZ | R-1240ZZ | 4.0 | 12 | 4.0 | 961 | 353 | 48 | 56 | 2.34 |
| 605ZZ | R-1450ZZ | 5.0 | 14 | 5.0 | 1334 | 510 | 40 | 50 | 3.75 |
| 606ZZ | R-1760ZZ | 6.0 | 17 | 6.0 | 2266 | 844 | 38 | 45 | 6.89 |
| 607ZZ | R-1970ZZ | 7.0 | 19 | 6.0 | 2335 | 893 | 36 | 43 | 8.24 |
| 608ZZ | R-2280ZZ | 8.0 | 22 | 7.0 | 3296 | 1383 | 34 | 40 | 12.90 |
| 609ZZ | — | 9.0 | 24 | 7.0 | 3335 | 1422 | 32 | 38 | 16.00 |

* All Bearings are available with stainless steel 440C

Please indicate '-2RS' behind the basic number, instead of 'ZZ' if you are looking for both side rubber seal bearing.

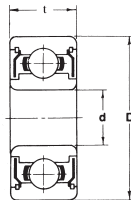
620 Series* Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 623ZZ | R-1030ZZ | 3 | 10 | 4 | 628 | 216 | 50 | 60 | 1.65 |
| 624ZZ | R-1340ZZ | 4 | 13 | 5 | 1305 | 491 | 40 | 48 | 3.20 |
| 625ZZ | R-1650ZZ | 5 | 16 | 5 | 1727 | 677 | 36 | 43 | 5.10 |
| 626ZZ | R-1960ZZ | 6 | 19 | 6 | 2335 | 893 | 32 | 40 | 8.65 |
| 627ZZ | R-2270ZZ | 7 | 22 | 7 | 3286 | 1383 | 30 | 36 | 13.10 |
| 628ZZ | — | 8 | 24 | 8 | 3335 | 1422 | 28 | 34 | 18.50 |
| 629ZZ | R-2690ZZ | 9 | 26 | 8 | 4571 | 1982 | 28 | 34 | 21.80 |

* All Bearings are available with stainless steel 440C

Please indicate '-2RS' behind the basic number, instead of 'ZZ' if you are looking for both side rubber seal bearing.

630 Series* Double Shielded



| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 633ZZ | – | 3 | 13 | 5 | 1305 | 491 | 40 | 48 | 3.43 |
| 634ZZ | R-1640ZZ | 4 | 16 | 5 | 1344 | 520 | 36 | 43 | 5.44 |
| 635ZZ | – | 5 | 19 | 6 | 2335 | 893 | 32 | 40 | 8.89 |
| 636ZZ | – | 6 | 22 | 7 | 3335 | 1422 | 30 | 36 | 14.50 |
| 637ZZ | – | 7 | 26 | 9 | 4571 | 1982 | 28 | 34 | 25.80 |
| 638ZZ | – | 8 | 28 | 9 | 4571 | 1982 | 28 | 34 | 30.30 |
| 639ZZ | – | 9 | 30 | 10 | 4660 | 2080 | 24 | 30 | 37.10 |

Please indicate '2RS' behind the basic number, instead of 'ZZ' if you are looking for both side rubber seal bearing.

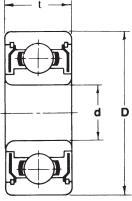
680 Series* Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 681XZZ | L-415ZZ | 1.5 | 4 | 2.0 | 108 | 34 | 100 | 120 | 0.14 |
| 682ZZ | L-520ZZ | 2.0 | 5 | 2.3 | 167 | 49 | 85 | 100 | 0.20 |
| 682XZZ | L-625ZZ | 2.5 | 6 | 2.6 | 186 | 59 | 71 | 80 | 0.35 |
| 683ZZ | L-730ZZ | 3.0 | 7 | 3.0 | 314 | 108 | 63 | 75 | 0.45 |
| 684ZZ | L-940ZZ | 4.0 | 9 | 4.0 | 638 | 226 | 53 | 63 | 1.00 |
| 685ZZ | L-1150ZZ | 5.0 | 11 | 5.0 | 716 | 294 | 45 | 53 | 1.93 |
| 686ZZ | L-1360ZZ | 6.0 | 13 | 5.0 | 1079 | 441 | 40 | 50 | 2.68 |
| 687ZZ | L-1470ZZ | 7.0 | 14 | 5.0 | 1177 | 510 | 40 | 50 | 2.95 |
| 688ZZ | L-1680ZZ | 8.0 | 16 | 5.0 | 1256 | 589 | 36 | 43 | 4.05 |
| 689ZZ | L-1790ZZ | 9.0 | 17 | 5.0 | 1324 | 667 | 36 | 43 | 4.38 |

* All Bearings are available with stainless steel 440C

Please indicate '2RS' behind the basic number, instead of 'ZZ' if you are looking for both side rubber seal bearing.

690 Series* Double Shielded



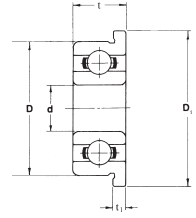
| Bearing Number | Equivalent Number | Dimensions (mm) | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | C _r | C _{or} | Grease | Oil | |
| 691XZZ | R-515ZZ | 1.5 | 5 | 2.6 | 167 | 49 | 85 | 100 | 0.25 |
| 692ZZ | R-620ZZ | 2.0 | 6 | 3.0 | 334 | 98 | 75 | 90 | 0.35 |
| 692XZZ | R-725ZZ | 2.5 | 7 | 3.5 | 383 | 128 | 63 | 75 | 0.55 |
| 693ZZ | R-830ZZ | 3.0 | 8 | 4.0 | 559 | 177 | 60 | 67 | 0.80 |
| 694ZZ | R-1140ZZ | 4.0 | 11 | 4.0 | 961 | 353 | 48 | 56 | 1.75 |
| 695ZZ | R-1350ZZ | 5.0 | 13 | 4.0 | 1079 | 432 | 43 | 50 | 2.31 |
| 696ZZ | R-1560ZZ | 6.0 | 15 | 5.0 | 1344 | 520 | 40 | 45 | 3.65 |
| 697ZZ | – | 7.0 | 17 | 5.0 | 1609 | 716 | 36 | 43 | 5.01 |
| 698ZZ | – | 8.0 | 19 | 6.0 | 2237 | 922 | 36 | 43 | 7.57 |
| 699ZZ | L-2090ZZ | 9.0 | 20 | 6.0 | 2472 | 1079 | 34 | 40 | 8.54 |

* All Bearings are available with stainless steel 440C

Please indicate '-2RS' behind the basic number, instead of 'ZZ' if you are looking for both side rubber seal bearing.

MF Series*

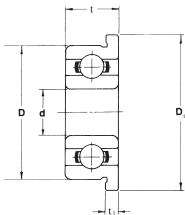
Flanged, Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| MF41X | — | 1.2 | 4 | 1.8 | 4.8 | 0.4 | 108 | 34 | 110 | 130 | 0.12 |
| MF52 | LF-520W02 | 2.0 | 5 | 2.0 | 6.2 | 0.6 | 167 | 49 | 85 | 100 | 0.19 |
| MF62 | RF-620W52 | 2.0 | 6 | 2.5 | 7.2 | 0.6 | 334 | 98 | 75 | 90 | 0.34 |
| MF72 | RF-720Y52 | 2.0 | 7 | 2.5 | 8.2 | 0.6 | 383 | 128 | 63 | 75 | 0.50 |
| MF82X | RF-825Y52 | 2.5 | 8 | 2.5 | 9.2 | 0.6 | 559 | 177 | 60 | 67 | 0.60 |
| MF63 | LF-630 | 3.0 | 6 | 2.0 | 7.2 | 0.6 | 206 | 74 | 71 | 80 | 0.26 |
| MF83 | RF-830Y52 | 3.0 | 8 | 2.5 | 9.2 | 0.6 | 392 | 137 | 60 | 67 | 0.59 |
| MF93 | RF-930Y52 | 3.0 | 9 | 2.5 | 10.6 | 0.6 | 569 | 186 | 56 | 67 | 0.83 |
| MF74 | LF-740 | 4.0 | 7 | 2.0 | 8.2 | 0.6 | 314 | 118 | 60 | 67 | 0.30 |
| MF84 | LF-840 | 4.0 | 8 | 2.0 | 9.2 | 0.6 | 392 | 137 | 56 | 67 | 0.47 |
| MF104 | LF-1040 | 4.0 | 10 | 3.0 | 11.2 | 0.6 | 589 | 206 | 48 | 56 | 1.04 |
| MF85 | LF-850 | 5.0 | 8 | 2.0 | 9.2 | 0.6 | 304 | 118 | 53 | 63 | 0.33 |
| MF95 | LF-950 | 5.0 | 9 | 2.5 | 10.2 | 0.6 | 432 | 167 | 50 | 60 | 0.62 |
| MF105 | LF-1050 | 5.0 | 10 | 3.0 | 11.6 | 0.6 | 431 | 167 | 50 | 60 | 1.00 |
| MF106 | LF-1060 | 6.0 | 10 | 2.5 | 11.2 | 0.6 | 500 | 216 | 45 | 53 | 0.64 |
| MF126 | LF-1260 | 6.0 | 12 | 3.0 | 13.6 | 0.6 | 716 | 294 | 43 | 50 | 1.44 |
| MF117 | LF-1170 | 7.0 | 11 | 2.5 | 12.2 | 0.6 | 451 | 206 | 43 | 50 | 0.69 |
| MF137 | LF-1370 | 7.0 | 13 | 3.0 | 14.2 | 0.6 | 540 | 275 | 40 | 48 | 1.64 |
| MF128 | LF-1280 | 8.0 | 12 | 2.5 | 13.6 | 0.6 | 540 | 275 | 40 | 48 | 0.81 |
| MF148 | LF-1480 | 8.0 | 14 | 3.5 | 15.6 | 0.8 | 814 | 383 | 38 | 45 | 2.13 |

* All Bearings are available with stainless steel 440C

600 Series* Flanged, Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F601X | RF-615 | 1.5 | 6 | 2.5 | 7.5 | 0.6 | 334 | 98 | 75 | 90 | 0.38 |
| F602 | RF-720 | 2.0 | 7 | 2.8 | 8.5 | 0.7 | 383 | 128 | 60 | 71 | 0.60 |
| F602X | RF-825 | 2.5 | 8 | 2.8 | 9.5 | 0.7 | 549 | 177 | 60 | 71 | 0.72 |
| F603 | RF-930 | 3.0 | 9 | 3.0 | 10.5 | 0.7 | 569 | 186 | 56 | 67 | 0.96 |
| F604 | RF-1240 | 4.0 | 12 | 4.0 | 13.5 | 1.0 | 961 | 353 | 48 | 56 | 2.42 |
| F605 | RF-1450 | 5.0 | 14 | 5.0 | 16.0 | 1.0 | 1334 | 510 | 40 | 50 | 3.83 |
| F606 | RF-1760 | 6.0 | 17 | 6.0 | 19.0 | 1.2 | 2266 | 844 | 38 | 45 | 6.47 |
| F607 | RF-1970 | 7.0 | 19 | 6.0 | 22.0 | 1.5 | 2335 | 893 | 36 | 43 | 8.93 |
| F608 | RF-2280 | 8.0 | 22 | 7.0 | 25.0 | 1.5 | 3296 | 1383 | 34 | 40 | 13.10 |
| F609 | — | 9.0 | 24 | 7.0 | 27.0 | 1.5 | 3335 | 1422 | 32 | 38 | 16.10 |

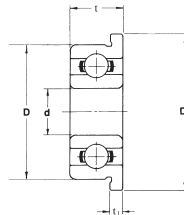
* All Bearings are available with stainless steel 440C

620 Series* Flanged, Open

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F623 | RF-1030 | 3 | 10 | 4 | 11.5 | 1.0 | 628 | 216 | 50 | 60 | 1.65 |
| F624 | RF-1340 | 4 | 13 | 5 | 15.0 | 1.0 | 1305 | 491 | 40 | 48 | 3.44 |
| F625 | RF-1650 | 5 | 16 | 5 | 18.0 | 1.0 | 1727 | 677 | 36 | 43 | 5.37 |
| F626 | RF-1960 | 6 | 19 | 6 | 22.0 | 1.5 | 2335 | 893 | 32 | 40 | 9.25 |
| F627 | RF-2270 | 7 | 22 | 7 | 25.0 | 1.5 | 3286 | 1383 | 30 | 36 | 14.00 |

* All Bearings are available with stainless steel 440C

630 Series* Flanged, Open



| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F634 | RF-1640 | 4 | 16 | 5 | 18 | 1.0 | 1344 | 520 | 36 | 43 | 5.66 |
| F635 | — | 5 | 19 | 6 | 22 | 1.5 | 2335 | 893 | 32 | 40 | 9.26 |

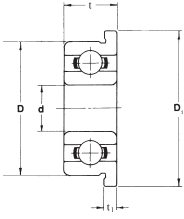
* All Bearings are available with stainless steel 440C

680 Series* Flanged, Open

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F681 | LF-310 | 1.0 | 3 | 1.0 | 3.8 | 0.3 | 74 | 20 | 130 | 150 | 0.04 |
| F681X | LF-415 | 1.5 | 4 | 1.2 | 5.0 | 0.4 | 108 | 34 | 100 | 120 | 0.12 |
| F682 | LF-520 | 2.0 | 5 | 1.5 | 6.1 | 0.5 | 167 | 49 | 85 | 100 | 0.19 |
| F682X | LF-625 | 2.5 | 6 | 1.8 | 7.1 | 0.5 | 186 | 59 | 71 | 80 | 0.24 |
| F683 | LF-730 | 3.0 | 7 | 2.0 | 8.1 | 0.5 | 314 | 108 | 63 | 75 | 0.37 |
| F684 | LF-940 | 4.0 | 9 | 2.5 | 10.3 | 0.6 | 638 | 226 | 53 | 63 | 0.74 |
| F685 | LF-1150 | 5.0 | 11 | 3.0 | 12.5 | 0.8 | 716 | 284 | 45 | 53 | 1.33 |
| F686 | LF-1360 | 6.0 | 13 | 3.5 | 15.0 | 1.0 | 1079 | 441 | 40 | 50 | 2.21 |
| F687 | LF-1470 | 7.0 | 14 | 3.5 | 16.0 | 1.0 | 1177 | 510 | 40 | 50 | 2.40 |
| F688 | LF-1680 | 8.0 | 16 | 4.0 | 18.0 | 1.0 | 1256 | 589 | 36 | 43 | 3.53 |
| F689 | LF-1790 | 9.0 | 17 | 4.0 | 19.0 | 1.0 | 1324 | 667 | 36 | 43 | 3.85 |

* All Bearings are available with stainless steel 440C

690 Series* Flanged, Open

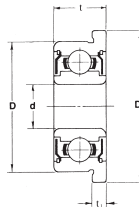


| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F691 | RF-410 | 1.0 | 4 | 1.6 | 5.0 | 0.5 | 137 | 39 | 100 | 120 | 0.14 |
| F691X | RF-515 | 1.5 | 5 | 2.0 | 6.5 | 0.6 | 167 | 49 | 85 | 100 | 0.26 |
| F692 | RF-620 | 2.0 | 6 | 2.3 | 7.5 | 0.6 | 334 | 98 | 75 | 90 | 0.35 |
| F692X | RF-725 | 2.5 | 7 | 2.5 | 8.5 | 0.7 | 383 | 128 | 63 | 75 | 0.50 |
| F693 | RF-830 | 3.0 | 8 | 3.0 | 9.5 | 0.7 | 559 | 177 | 60 | 67 | 0.71 |
| F694 | RF-1140 | 4.0 | 11 | 4.0 | 12.5 | 1.0 | 961 | 353 | 48 | 56 | 1.91 |
| F695 | RF-1350 | 5.0 | 13 | 4.0 | 15.0 | 1.0 | 1079 | 432 | 43 | 50 | 2.73 |
| F696 | RF-1560 | 6.0 | 15 | 5.0 | 17.0 | 1.2 | 1344 | 520 | 40 | 45 | 4.24 |
| F697 | – | 7.0 | 17 | 5.0 | 19.0 | 1.2 | 1609 | 716 | 36 | 43 | 5.79 |
| F698 | – | 8.0 | 19 | 6.0 | 22.0 | 1.5 | 2237 | 922 | 36 | 43 | 8.25 |
| F699 | LF-2090 | 9.0 | 20 | 6.0 | 23.0 | 1.5 | 2472 | 1079 | 34 | 40 | 9.57 |

* All Bearings are available with stainless steel 440C

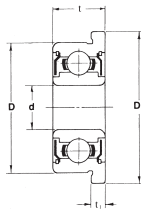
MF Series*

Flanged, Double Shielded



| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| MF52ZZ | LF-520ZZW52 | 2 | 5 | 2.5 | 6.2 | 0.6 | 167 | 49 | 85 | 100 | 0.25 |
| MF72ZZ | RF-720ZZY03 | 2 | 7 | 3.0 | 8.2 | 0.6 | 383 | 128 | 63 | 75 | 0.60 |
| MF63ZZ | LF-630ZZ | 3 | 6 | 2.5 | 7.2 | 0.6 | 206 | 74 | 71 | 80 | 0.34 |
| MF93ZZ | RFR-930ZZY04 | 3 | 9 | 4.0 | 10.6 | 0.8 | 569 | 186 | 56 | 67 | 1.30 |
| MF74ZZ | LF-740ZZ | 4 | 7 | 2.5 | 8.2 | 0.6 | 255 | 108 | 60 | 67 | 0.40 |
| MF84ZZ | LF-840ZZ | 4 | 8 | 3.0 | 9.2 | 0.6 | 392 | 137 | 56 | 67 | 0.64 |
| MF104ZZ | LF-1040ZZ | 4 | 10 | 4.0 | 11.6 | 0.8 | 589 | 206 | 48 | 56 | 1.50 |
| MF85ZZ | LF-850ZZ | 5 | 8 | 2.5 | 9.2 | 0.6 | 216 | 88 | 53 | 63 | 0.42 |
| MF95ZZ | LF-950ZZ | 5 | 9 | 3.0 | 10.2 | 0.6 | 432 | 167 | 50 | 60 | 0.66 |
| MF105ZZ | LF-1050ZZ | 5 | 10 | 4.0 | 11.6 | 0.8 | 432 | 167 | 50 | 60 | 1.38 |
| MF115ZZ | — | 5 | 11 | 4.0 | 12.6 | 0.8 | 716 | 284 | 45 | 53 | 0.81 |
| MF106ZZ | LF-1060ZZ | 6 | 10 | 3.0 | 11.2 | 0.6 | 500 | 216 | 45 | 53 | 0.79 |
| MF126ZZ | LF-1260ZZ | 6 | 12 | 4.0 | 13.6 | 0.8 | 716 | 294 | 43 | 50 | 1.86 |
| MF117ZZ | LF-1170ZZ | 7 | 11 | 3.0 | 12.2 | 0.6 | 451 | 206 | 43 | 50 | 0.81 |
| MF137ZZ | LF-1370ZZ | 7 | 13 | 4.0 | 14.6 | 0.8 | 540 | 275 | 40 | 48 | 2.17 |
| MF128ZZ | LF-1280ZZ | 8 | 12 | 3.5 | 13.6 | 0.8 | 540 | 275 | 40 | 48 | 1.14 |
| MF148ZZ | LF-1480ZZ | 8 | 14 | 4.0 | 15.6 | 0.8 | 814 | 383 | 38 | 45 | 2.42 |

* All Bearings are available with stainless steel 440C



600 Series* Flanged, Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F601XZZ | RF-615ZZ | 1.5 | 6 | 3.0 | 7.5 | 0.8 | 334 | 98 | 75 | 90 | 0.50 |
| F602ZZ | RF-720ZZ | 2.0 | 7 | 3.5 | 8.5 | 0.9 | 383 | 128 | 60 | 71 | 0.73 |
| F602XZZ | RF-825ZZ | 2.5 | 8 | 4.0 | 9.5 | 0.9 | 549 | 177 | 60 | 71 | 0.99 |
| F603ZZ | RF-930ZZ | 3.0 | 9 | 5.0 | 10.5 | 1.0 | 569 | 186 | 56 | 67 | 1.61 |
| F604ZZ | RF-1240ZZ | 4.0 | 12 | 4.0 | 13.5 | 1.0 | 961 | 353 | 48 | 56 | 2.57 |
| F605ZZ | RF-1450ZZ | 5.0 | 14 | 5.0 | 16.0 | 1.0 | 1334 | 510 | 40 | 50 | 4.12 |
| F606ZZ | RF-1760ZZ | 6.0 | 17 | 6.0 | 19.0 | 1.2 | 2266 | 844 | 38 | 45 | 7.42 |
| F607ZZ | RF-1970ZZ | 7.0 | 19 | 6.0 | 22.0 | 1.5 | 2335 | 893 | 36 | 43 | 9.37 |
| F608ZZ | RF-2280ZZ | 8.0 | 22 | 7.0 | 25.0 | 1.5 | 3296 | 1383 | 34 | 40 | 14.20 |
| F609ZZ | — | 9.0 | 24 | 7.0 | 27.0 | 1.5 | 3335 | 1422 | 32 | 38 | 17.40 |

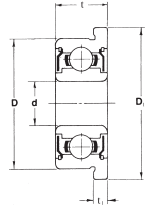
* All Bearings are available with stainless steel 440C

620 Series* Flanged, Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F623ZZ | RF-1030ZZ | 3 | 10 | 4 | 11.5 | 1.0 | 628 | 216 | 50 | 60 | 1.85 |
| F624ZZ | RF-1340ZZ | 4 | 13 | 5 | 15.0 | 1.0 | 1305 | 491 | 40 | 48 | 3.54 |
| F625ZZ | RF-1650ZZ | 5 | 16 | 5 | 18.0 | 1.0 | 1727 | 677 | 36 | 43 | 5.52 |
| F626ZZ | RF-1960ZZ | 6 | 19 | 6 | 22.0 | 1.5 | 2335 | 893 | 32 | 40 | 9.78 |
| F627ZZ | RF-2270ZZ | 7 | 22 | 7 | 25.0 | 1.5 | 3286 | 1383 | 30 | 36 | 14.40 |

* All Bearings are available with stainless steel 440C

630 Series* Flanged, Double Shielded



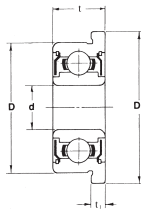
| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F634ZZ | RF-1640ZZ | 4 | 16 | 5 | 18 | 1.0 | 1344 | 520 | 36 | 43 | 5.86 |
| F635ZZ | — | 5 | 19 | 6 | 22 | 1.5 | 2335 | 893 | 32 | 40 | 9.65 |

* All Bearings are available with stainless steel 440C

680 Series* Flanged, Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F681XZZ | LF-415ZZ | 1.5 | 4 | 2.0 | 5.0 | 0.6 | 108 | 34 | 100 | 120 | 0.17 |
| F682ZZ | LF-520ZZ | 2.0 | 5 | 2.3 | 6.1 | 0.6 | 167 | 49 | 85 | 100 | 0.24 |
| F682XZZ | LF-625ZZ | 2.5 | 6 | 2.6 | 7.1 | 0.8 | 186 | 59 | 71 | 80 | 0.42 |
| F683ZZ | LF-730ZZ | 3.0 | 7 | 3.0 | 8.1 | 0.8 | 314 | 108 | 63 | 75 | 0.53 |
| F684ZZ | LF-940ZZ | 4.0 | 9 | 4.0 | 10.3 | 1.0 | 638 | 226 | 53 | 63 | 1.15 |
| F685ZZ | LF-1150ZZ | 5.0 | 11 | 5.0 | 12.5 | 1.0 | 716 | 284 | 45 | 53 | 2.15 |
| F686ZZ | LF-1360ZZ | 6.0 | 13 | 5.0 | 15.0 | 1.1 | 1079 | 441 | 40 | 50 | 3.06 |
| F687ZZ | LF-1470ZZ | 7.0 | 14 | 5.0 | 16.0 | 1.1 | 1177 | 510 | 40 | 50 | 3.35 |
| F688ZZ | LF-1680ZZ | 8.0 | 16 | 5.0 | 18.0 | 1.1 | 1256 | 589 | 36 | 43 | 4.51 |
| F689ZZ | — | 9.0 | 17 | 5.0 | 19.0 | 1.1 | 1324 | 667 | 36 | 43 | 4.87 |

* All Bearings are available with stainless steel 440C



690 Series* Flanged, Double Shielded

| Bearing Number | Equivalent Number | Dimensions (mm) | | | | | Basic Load Ratings (N) | | Limiting Speed X 10 ³ (rev/min) | | Weight (g) |
|----------------|-------------------|-----------------|------|---------|----------------------------|-----------------------------|------------------------|-----------------|--|-----|------------|
| | | Bore d | OD D | Width t | Flange Dia. D ₁ | Flange Width t ₁ | C _r | C _{or} | Grease | Oil | |
| F691XZZ | RF-515ZZ | 1.5 | 5 | 2.6 | 6.5 | 0.8 | 167 | 49 | 85 | 100 | 0.33 |
| F692ZZ | RF-620ZZ | 2.0 | 6 | 3.0 | 7.5 | 0.8 | 334 | 98 | 75 | 90 | 0.45 |
| F692XZZ | RF-725ZZ | 2.5 | 7 | 3.5 | 8.5 | 0.9 | 383 | 128 | 63 | 75 | 0.68 |
| F693ZZ | RF-830ZZ | 3.0 | 8 | 4.0 | 9.5 | 0.9 | 559 | 177 | 60 | 67 | 0.94 |
| F694ZZ | RF-1140ZZ | 4.0 | 11 | 4.0 | 12.5 | 1.0 | 961 | 353 | 48 | 56 | 1.97 |
| F695ZZ | RF-1350ZZ | 5.0 | 13 | 4.0 | 15.0 | 1.0 | 1079 | 432 | 43 | 50 | 2.65 |
| F696ZZ | RF-1560ZZ | 6.0 | 15 | 5.0 | 17.0 | 1.2 | 1344 | 520 | 40 | 45 | 4.04 |
| F697ZZ | – | 7.0 | 17 | 5.0 | 19.0 | 1.2 | 1609 | 716 | 36 | 43 | 5.54 |
| F698ZZ | – | 8.0 | 19 | 6.0 | 22.0 | 1.5 | 2237 | 922 | 36 | 43 | 8.70 |
| F699ZZ | LF-2090ZZ | 9.0 | 20 | 5.0 | 23.0 | 1.5 | 2472 | 1079 | 34 | 40 | 9.73 |

* All Bearings are available with stainless steel 440C