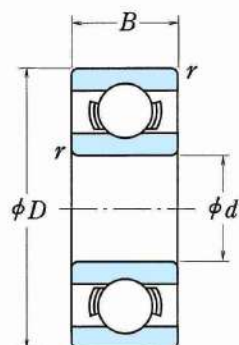


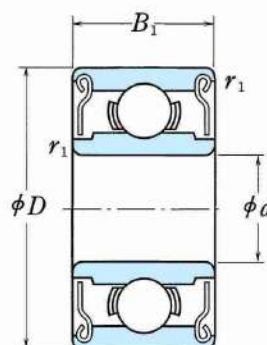
# 小型滾珠軸承・微型滾珠軸承

公制系列

內徑 1~4 mm



開放型



防塵蓋型  
ZZ・ZZ1

| 主要尺寸<br>(mm) |    |     |                |                          |                                       | 基本額定負荷<br>(N)<br>(kgf) |                 |                |                 | 極限轉速<br>(min <sup>-1</sup> ) |                  | 代號      |            |      |
|--------------|----|-----|----------------|--------------------------|---------------------------------------|------------------------|-----------------|----------------|-----------------|------------------------------|------------------|---------|------------|------|
| d            | D  | B   | B <sub>1</sub> | r <sup>(1)</sup><br>(最小) | r <sub>1</sub> <sup>(1)</sup><br>(最小) | C <sub>r</sub>         | C <sub>0r</sub> | C <sub>r</sub> | C <sub>0r</sub> | 脂潤滑<br>開放型<br>Z・ZZ型          | 油潤滑<br>開放型<br>Z型 | 開放型     | 防塵蓋型       | 密封圈型 |
| 1            | 3  | 1   | —              | 0.05                     | —                                     | 80                     | 23              | 8              | 2.5             | 130 000                      | 150 000          | 681     | —          | —    |
|              | 3  | 1.5 | —              | 0.05                     | —                                     | 80                     | 23              | 8              | 2.5             | 130 000                      | 150 000          | MR 31   | —          | —    |
|              | 4  | 1.6 | —              | 0.1                      | —                                     | 138                    | 35              | 14             | 3.5             | 100 000                      | 120 000          | 691     | —          | —    |
| 1.2          | 4  | 1.8 | 2.5            | 0.1                      | 0.1                                   | 138                    | 35              | 14             | 3.5             | 110 000                      | 130 000          | MR 41X  | MR 41 XZZ  | —    |
| 1.5          | 4  | 1.2 | 2              | 0.05                     | 0.05                                  | 112                    | 33              | 11             | 3.5             | 100 000                      | 120 000          | 681X    | 681 XZZ    | —    |
|              | 5  | 2   | 2.6            | 0.15                     | 0.15                                  | 237                    | 69              | 24             | 7               | 85 000                       | 100 000          | 691X    | 691 XZZ    | —    |
|              | 6  | 2.5 | 3              | 0.15                     | 0.15                                  | 330                    | 98              | 34             | 10              | 75 000                       | 90 000           | 601X    | 601 XZZ    | —    |
| 2            | 5  | 1.5 | 2.3            | 0.08                     | 0.08                                  | 169                    | 50              | 17             | 5               | 85 000                       | 100 000          | 682     | 682 ZZ     | —    |
|              | 5  | 2   | 2.5            | 0.1                      | 0.1                                   | 187                    | 58              | 19             | 6               | 85 000                       | 100 000          | MR 52B  | MR 52 BZZ  | —    |
|              | 6  | 2.3 | 3              | 0.15                     | 0.15                                  | 330                    | 98              | 34             | 10              | 75 000                       | 90 000           | 692     | 692 ZZ     | —    |
|              | 6  | 2.5 | 2.5            | 0.15                     | 0.15                                  | 330                    | 98              | 34             | 10              | 75 000                       | 90 000           | MR 62   | MR 62 ZZ   | —    |
|              | 7  | 2.5 | 3              | 0.15                     | 0.15                                  | 385                    | 127             | 39             | 13              | 63 000                       | 75 000           | MR 72   | MR 72 ZZ   | —    |
|              | 7  | 2.8 | 3.5            | 0.15                     | 0.15                                  | 385                    | 127             | 39             | 13              | 63 000                       | 75 000           | 602     | 602 ZZ     | —    |
| 2.5          | 6  | 1.8 | 2.6            | 0.08                     | 0.08                                  | 208                    | 74              | 21             | 7.5             | 71 000                       | 80 000           | 682X    | 682 XZZ    | —    |
|              | 7  | 2.5 | 3.5            | 0.15                     | 0.15                                  | 385                    | 127             | 39             | 13              | 63 000                       | 75 000           | 692X    | 692 XZZ    | —    |
|              | 8  | 2.5 | —              | 0.2                      | —                                     | 560                    | 179             | 57             | 18              | 60 000                       | 67 000           | MR 82X  | —          | —    |
| 3            | 8  | 2.8 | 4              | 0.15                     | 0.15                                  | 550                    | 175             | 56             | 18              | 60 000                       | 71 000           | 602X    | 602 XZZ    | —    |
|              | 6  | 2   | 2.5            | 0.1                      | 0.1                                   | 208                    | 74              | 21             | 7.5             | 71 000                       | 80 000           | MR 63   | MR 63 ZZ   | —    |
|              | 7  | 2   | 3              | 0.1                      | 0.1                                   | 390                    | 130             | 40             | 13              | 63 000                       | 75 000           | 683A    | 683 AZZ    | —    |
|              | 8  | 2.5 | —              | 0.15                     | —                                     | 560                    | 179             | 57             | 18              | 60 000                       | 67 000           | MR 83   | —          | —    |
|              | 8  | 3   | 4              | 0.15                     | 0.15                                  | 560                    | 179             | 57             | 18              | 60 000                       | 67 000           | 693     | 693 ZZ     | —    |
|              | 9  | 2.5 | 4              | 0.2                      | 0.15                                  | 570                    | 187             | 58             | 19              | 56 000                       | 67 000           | MR 93   | MR 93 ZZ   | —    |
|              | 9  | 3   | 5              | 0.15                     | 0.15                                  | 570                    | 187             | 58             | 19              | 56 000                       | 67 000           | 603     | 603 ZZ     | —    |
|              | 10 | 4   | 4              | 0.15                     | 0.15                                  | 630                    | 218             | 64             | 22              | 50 000                       | 60 000           | 623     | 623 ZZ     | —    |
|              | 13 | 5   | 5              | 0.2                      | 0.2                                   | 1 300                  | 485             | 133            | 49              | 40 000                       | 48 000           | 633     | 633 ZZ     | —    |
| 4            | 7  | 2   | —              | 0.1                      | —                                     | 310                    | 115             | 32             | 12              | 60 000                       | 67 000           | MR 74   | —          | —    |
|              | 7  | —   | 2.5            | —                        | 0.1                                   | 255                    | 107             | 26             | 11              | 60 000                       | 71 000           | —       | MR 74 ZZ   | —    |
|              | 8  | 2   | 3              | 0.15                     | 0.1                                   | 395                    | 139             | 40             | 14              | 56 000                       | 67 000           | MR 84   | MR 84 ZZ   | —    |
|              | 9  | 2.5 | 4              | (0.15)                   | (0.15)                                | 640                    | 225             | 65             | 23              | 53 000                       | 63 000           | 684A    | 684 AZZ    | —    |
|              | 10 | 3   | 4              | 0.2                      | 0.15                                  | 710                    | 270             | 73             | 28              | 50 000                       | 60 000           | MR 104B | MR 104 BZZ | —    |
|              | 11 | 4   | 4              | 0.15                     | 0.15                                  | 960                    | 345             | 98             | 35              | 48 000                       | 56 000           | 694     | 694 ZZ     | —    |
|              | 12 | 4   | 4              | 0.2                      | 0.2                                   | 960                    | 345             | 98             | 35              | 48 000                       | 56 000           | 604     | 604 ZZ     | —    |
|              | 13 | 5   | 5              | 0.2                      | 0.2                                   | 1 300                  | 485             | 133            | 49              | 40 000                       | 48 000           | 624     | 624 ZZ     | —    |
|              | 16 | 5   | 5              | 0.3                      | 0.3                                   | 1 730                  | 670             | 177            | 68              | 36 000                       | 43 000           | 634     | 634 ZZ1    | —    |

註 (1) ( )內的數值並非以JIS B 1521為基準。

備註 欲將防塵蓋軸承使用於外輪旋轉之際，請向提出諮詢。

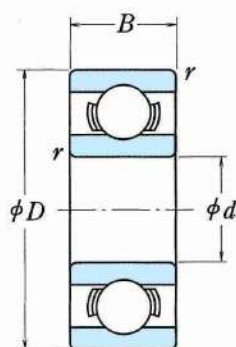


慶順五金・軸承  
WWW.CS1970.COM.TW

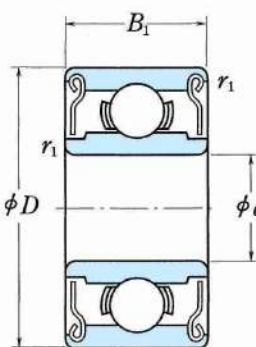
# 小型滾珠軸承・微型滾珠軸承

公制系列

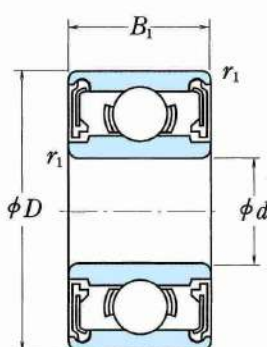
內徑 5~9 mm



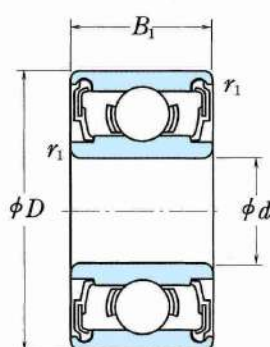
開放型



防塵蓋型  
ZZ・ZZ1



非接觸密封圈型  
VV



接觸密封圈型  
DD

| 主要尺寸 (mm) |    |     |                |                          |                                       | 基本額定負荷 (N)     |                 |                |                 | 極限轉速 (min <sup>-1</sup> ) |        |           | 代號     |            |      |    |
|-----------|----|-----|----------------|--------------------------|---------------------------------------|----------------|-----------------|----------------|-----------------|---------------------------|--------|-----------|--------|------------|------|----|
| d         | D  | B   | B <sub>1</sub> | r <sup>(1)</sup><br>(最小) | r <sub>1</sub> <sup>(1)</sup><br>(最小) | C <sub>r</sub> | C <sub>0r</sub> | C <sub>r</sub> | C <sub>0r</sub> | 脂潤滑                       |        | 油潤滑       | 開放型    | 防塵蓋型       | 密封圈型 |    |
|           |    |     |                |                          |                                       |                |                 |                |                 | 開放型<br>Z・ZZ型<br>V・VV型     | D・DD型  | 開放型<br>Z型 |        |            |      |    |
| 5         | 8  | 2   | —              | 0.1                      | —                                     | 310            | 120             | 31             | 12              | 53 000                    | —      | 63 000    | MR 85  | —          | —    | —  |
|           | 8  | —   | 2.5            | —                        | 0.1                                   | 278            | 131             | 28             | 13              | 53 000                    | —      | 63 000    | —      | MR 85 ZZ   | —    | —  |
|           | 9  | 2.5 | 3              | 0.15                     | 0.15                                  | 430            | 168             | 44             | 17              | 50 000                    | —      | 60 000    | MR 95  | MR 95 ZZ1  | —    | —  |
|           | 10 | 3   | 4              | 0.15                     | 0.15                                  | 430            | 168             | 44             | 17              | 50 000                    | —      | 60 000    | MR 105 | MR 105 ZZ  | —    | —  |
|           | 11 | —   | 4              | —                        | 0.15                                  | 715            | 276             | 73             | 28              | 48 000                    | —      | 56 000    | —      | MR 115 ZZ  | VV   | —  |
|           | 11 | 3   | 5              | 0.15                     | 0.15                                  | 715            | 281             | 73             | 29              | 45 000                    | —      | 53 000    | 685    | 685 ZZ     | —    | —  |
|           | 13 | 4   | 4              | 0.2                      | 0.2                                   | 1 080          | 430             | 110            | 44              | 43 000                    | 40 000 | 50 000    | 695    | 695 ZZ     | VV   | DD |
|           | 14 | 5   | 5              | 0.2                      | 0.2                                   | 1 330          | 505             | 135            | 52              | 40 000                    | 38 000 | 50 000    | 605    | 605 ZZ     | —    | DD |
|           | 16 | 5   | 5              | 0.3                      | 0.3                                   | 1 730          | 670             | 177            | 68              | 36 000                    | 32 000 | 43 000    | 625    | 625 ZZ1    | VV   | DD |
|           | 19 | 6   | 6              | 0.3                      | 0.3                                   | 2 340          | 885             | 238            | 90              | 32 000                    | 30 000 | 40 000    | 635    | 635 ZZ1    | VV   | DD |
| 6         | 10 | 2.5 | 3              | 0.15                     | 0.1                                   | 495            | 218             | 51             | 22              | 45 000                    | —      | 53 000    | MR 106 | MR 106 ZZ1 | —    | —  |
|           | 12 | 3   | 4              | 0.2                      | 0.15                                  | 715            | 292             | 73             | 30              | 43 000                    | 40 000 | 50 000    | MR 126 | MR 126 ZZ  | —    | DD |
|           | 13 | 3.5 | 5              | 0.15                     | 0.15                                  | 1 080          | 440             | 110            | 45              | 40 000                    | 38 000 | 50 000    | 686 A  | 686 AZZ    | VV   | DD |
|           | 15 | 5   | 5              | 0.2                      | 0.2                                   | 1 730          | 670             | 177            | 68              | 40 000                    | 36 000 | 45 000    | 696    | 696 ZZ1    | VV   | DD |
|           | 17 | 6   | 6              | 0.3                      | 0.3                                   | 2 260          | 835             | 231            | 85              | 38 000                    | 34 000 | 45 000    | 606    | 606 ZZ     | VV   | DD |
|           | 19 | 6   | 6              | 0.3                      | 0.3                                   | 2 340          | 885             | 238            | 90              | 32 000                    | 30 000 | 40 000    | 626    | 626 ZZ1    | VV   | DD |
|           | 22 | 7   | 7              | 0.3                      | 0.3                                   | 3 300          | 1 370           | 335            | 140             | 30 000                    | 28 000 | 36 000    | 636    | 636 ZZ     | VV   | DD |
|           | 22 | 7   | 7              | 0.3                      | 0.3                                   | 3 300          | 1 370           | 335            | 140             | 30 000                    | 28 000 | 36 000    | 636    | 636 ZZ     | VV   | DD |
| 7         | 11 | 2.5 | 3              | 0.15                     | 0.1                                   | 455            | 201             | 47             | 21              | 43 000                    | —      | 50 000    | MR 117 | MR 117 ZZ  | —    | —  |
|           | 13 | 3   | 4              | 0.2                      | 0.15                                  | 540            | 276             | 55             | 28              | 40 000                    | —      | 48 000    | MR 137 | MR 137 ZZ  | —    | —  |
|           | 14 | 3.5 | 5              | 0.15                     | 0.15                                  | 1 170          | 510             | 120            | 52              | 40 000                    | 34 000 | 45 000    | 687    | 687 ZZ1    | VV   | DD |
|           | 17 | 5   | 5              | 0.3                      | 0.3                                   | 1 610          | 710             | 164            | 73              | 36 000                    | 28 000 | 43 000    | 697    | 697 ZZ1    | VV   | DD |
|           | 19 | 6   | 6              | 0.3                      | 0.3                                   | 2 340          | 885             | 238            | 90              | 36 000                    | 32 000 | 43 000    | 607    | 607 ZZ1    | VV   | DD |
|           | 22 | 7   | 7              | 0.3                      | 0.3                                   | 3 300          | 1 370           | 335            | 140             | 30 000                    | 28 000 | 36 000    | 627    | 627 ZZ     | VV   | DD |
|           | 26 | 9   | 9              | 0.3                      | 0.3                                   | 4 550          | 1 970           | 465            | 201             | 28 000                    | 22 000 | 34 000    | 637    | 637 ZZ1    | VV   | DD |
|           | 26 | 9   | 9              | 0.3                      | 0.3                                   | 4 550          | 1 970           | 465            | 201             | 28 000                    | 22 000 | 34 000    | 637    | 637 ZZ1    | VV   | DD |
| 8         | 12 | 2.5 | 3.5            | 0.15                     | 0.1                                   | 545            | 274             | 56             | 28              | 40 000                    | —      | 48 000    | MR 128 | MR 128 ZZ1 | —    | —  |
|           | 14 | 3.5 | 4              | 0.2                      | 0.15                                  | 820            | 385             | 83             | 39              | 38 000                    | 32 000 | 45 000    | MR 148 | MR 148 ZZ  | VV   | DD |
|           | 16 | 4   | 5              | 0.2                      | 0.2                                   | 1 610          | 710             | 164            | 73              | 36 000                    | 28 000 | 43 000    | 688 A  | 688 AZZ1   | VV   | DD |
|           | 19 | 6   | 6              | 0.3                      | 0.3                                   | 2 240          | 910             | 228            | 93              | 36 000                    | 28 000 | 43 000    | 698    | 698 ZZ     | VV   | DD |
|           | 22 | 7   | 7              | 0.3                      | 0.3                                   | 3 300          | 1 370           | 335            | 140             | 34 000                    | 28 000 | 40 000    | 608    | 608 ZZ     | VV   | DD |
|           | 24 | 8   | 8              | 0.3                      | 0.3                                   | 3 350          | 1 430           | 340            | 146             | 28 000                    | 24 000 | 34 000    | 628    | 628 ZZ     | VV   | DD |
|           | 28 | 9   | 9              | 0.3                      | 0.3                                   | 4 550          | 1 970           | 465            | 201             | 28 000                    | 22 000 | 34 000    | 638    | 638 ZZ1    | VV   | DD |
| 9         | 17 | 4   | 5              | 0.2                      | 0.2                                   | 1 330          | 665             | 136            | 68              | 36 000                    | 24 000 | 43 000    | 689    | 689 ZZ1    | VV   | DD |
|           | 20 | 6   | 6              | 0.3                      | 0.3                                   | 1 720          | 840             | 175            | 86              | 34 000                    | 24 000 | 40 000    | 699    | 699 ZZ1    | VV   | DD |
|           | 24 | 7   | 7              | 0.3                      | 0.3                                   | 3 350          | 1 430           | 340            | 146             | 32 000                    | 24 000 | 38 000    | 609    | 609 ZZ     | VV   | DD |
|           | 26 | 8   | 8              | (0.6)                    | (0.6)                                 | 4 550          | 1 970           | 465            | 201             | 28 000                    | 22 000 | 34 000    | 629    | 629 ZZ     | VV   | DD |
|           | 30 | 10  | 10             | 0.6                      | 0.6                                   | 5 100          | 2 390           | 520            | 244             | 24 000                    | —      | 30 000    | 639    | 639 ZZ     | VV   | —  |

註 (1) ( ) 內的數值並非以 JIS B 1521 為基準。

備註 1. 欲將密封圈、防塵蓋軸承使用於外輪旋轉之際，請向提出諮詢。

2. 亦生產帶止動圈軸承，如需購買請詢問。



慶順五金・軸承

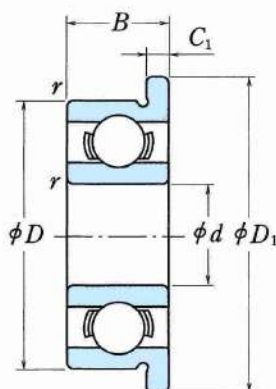
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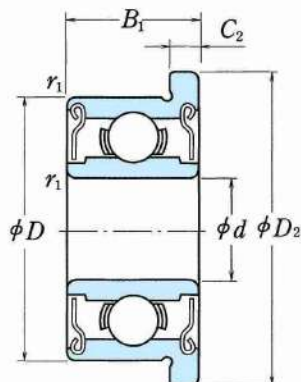
# 小型滾珠軸承・微型滾珠軸承

公制系列 帶止動擋邊

內徑 1~4 mm



開放型



防塵蓋型  
ZZ・ZZ1

| 主 要 尺 寸<br>(mm) |    |                |                |     |                |                |                |                          |                                       | 基 本 額 定 負 荷<br>(N) [kgf] |                 |                |                 | 極 限 轉 速<br>(min <sup>-1</sup> ) |                     | 代 號      |            |         |
|-----------------|----|----------------|----------------|-----|----------------|----------------|----------------|--------------------------|---------------------------------------|--------------------------|-----------------|----------------|-----------------|---------------------------------|---------------------|----------|------------|---------|
| d               | D  | D <sub>1</sub> | D <sub>2</sub> | B   | B <sub>1</sub> | C <sub>1</sub> | C <sub>2</sub> | r <sup>(1)</sup><br>(最小) | r <sub>1</sub> <sup>(1)</sup><br>(最小) | C <sub>r</sub>           | C <sub>0r</sub> | C <sub>r</sub> | C <sub>0r</sub> | 脂潤滑<br>開 放 型<br>Z・ZZ 型          | 油潤滑<br>開 放 型<br>Z 型 | 開 放 型    | 防 塵 蓋 型    | 密 封 圈 型 |
| 1               | 3  | 3.8            | —              | 1   | —              | 0.3            | —              | 0.05                     | —                                     | 80                       | 23              | 8              | 2.5             | 130 000                         | 150 000             | F 681    | —          | —       |
|                 | 4  | 5              | —              | 1.6 | —              | 0.5            | —              | 0.1                      | —                                     | 140                      | 36              | 14             | 3.5             | 100 000                         | 120 000             | F 691    | —          | —       |
| 1.2             | 4  | 4.8            | —              | 1.8 | —              | 0.4            | —              | 0.1                      | —                                     | 138                      | 35              | 14             | 3.5             | 110 000                         | 130 000             | MF 41 X  | —          | —       |
| 1.5             | 4  | 5              | 5              | 1.2 | 2              | 0.4            | 0.6            | 0.05                     | 0.05                                  | 112                      | 33              | 11             | 3.5             | 100 000                         | 120 000             | F 681 X  | F 681 XZZ  | —       |
|                 | 5  | 6.5            | 6.5            | 2   | 2.6            | 0.6            | 0.8            | 0.15                     | 0.15                                  | 237                      | 69              | 24             | 7               | 85 000                          | 100 000             | F 691 X  | F 691 XZZ  | —       |
|                 | 6  | 7.5            | 7.5            | 2.5 | 3              | 0.6            | 0.8            | 0.15                     | 0.15                                  | 330                      | 98              | 34             | 10              | 75 000                          | 90 000              | F 601 X  | F 601 XZZ  | —       |
| 2               | 5  | 6.1            | 6.1            | 1.5 | 2.3            | 0.5            | 0.6            | 0.08                     | 0.08                                  | 169                      | 50              | 17             | 5               | 85 000                          | 100 000             | F 682    | F 682 ZZ   | —       |
|                 | 5  | 6.2            | 6.2            | 2   | 2.5            | 0.6            | 0.6            | 0.1                      | 0.1                                   | 187                      | 58              | 19             | 6               | 85 000                          | 100 000             | MF 52 B  | MF 52 BZZ  | —       |
|                 | 6  | 7.5            | 7.5            | 2.3 | 3              | 0.6            | 0.8            | 0.15                     | 0.15                                  | 330                      | 98              | 34             | 10              | 75 000                          | 90 000              | F 692    | F 692 ZZ   | —       |
|                 | 6  | 7.2            | —              | 2.5 | —              | 0.6            | —              | 0.15                     | —                                     | 330                      | 98              | 34             | 10              | 75 000                          | 90 000              | MF 62    | —          | —       |
|                 | 7  | 8.2            | 8.2            | 2.5 | 3              | 0.6            | 0.6            | 0.15                     | 0.15                                  | 385                      | 127             | 39             | 13              | 63 000                          | 75 000              | MF 72    | MF 72 ZZ   | —       |
|                 | 7  | 8.5            | 8.5            | 2.8 | 3.5            | 0.7            | 0.9            | 0.15                     | 0.15                                  | 385                      | 127             | 39             | 13              | 63 000                          | 75 000              | F 602    | F 602 ZZ   | —       |
| 2.5             | 6  | 7.1            | 7.1            | 1.8 | 2.6            | 0.5            | 0.8            | 0.08                     | 0.08                                  | 208                      | 74              | 21             | 7.5             | 71 000                          | 80 000              | F 682 X  | F 682 XZZ  | —       |
|                 | 7  | 8.5            | 8.5            | 2.5 | 3.5            | 0.7            | 0.9            | 0.15                     | 0.15                                  | 385                      | 127             | 39             | 13              | 63 000                          | 75 000              | F 692 X  | F 692 XZZ  | —       |
|                 | 8  | 9.2            | —              | 2.5 | —              | 0.6            | —              | 0.2                      | —                                     | 560                      | 179             | 57             | 18              | 60 000                          | 67 000              | MF 82 X  | —          | —       |
|                 | 8  | 9.5            | 9.5            | 2.8 | 4              | 0.7            | 0.9            | 0.15                     | 0.15                                  | 550                      | 175             | 56             | 18              | 60 000                          | 71 000              | F 602 X  | F 602 XZZ  | —       |
| 3               | 6  | 7.2            | 7.2            | 2   | 2.5            | 0.6            | 0.6            | 0.1                      | 0.1                                   | 208                      | 74              | 21             | 7.5             | 71 000                          | 80 000              | MF 63    | MF 63 ZZ   | —       |
|                 | 7  | 8.1            | 8.1            | 2   | 3              | 0.5            | 0.8            | 0.1                      | 0.1                                   | 390                      | 130             | 40             | 13              | 63 000                          | 75 000              | F 683 A  | F 683 AZZ  | —       |
|                 | 8  | 9.2            | —              | 2.5 | —              | 0.6            | —              | 0.15                     | —                                     | 560                      | 179             | 57             | 18              | 60 000                          | 67 000              | MF 83    | —          | —       |
|                 | 8  | 9.5            | 9.5            | 3   | 4              | 0.7            | 0.9            | 0.15                     | 0.15                                  | 560                      | 179             | 57             | 18              | 60 000                          | 67 000              | F 693    | F 693 ZZ   | —       |
|                 | 9  | 10.2           | 10.6           | 2.5 | 4              | 0.6            | 0.8            | 0.2                      | 0.15                                  | 570                      | 187             | 58             | 19              | 56 000                          | 67 000              | MF 93    | MF 93 ZZ   | —       |
|                 | 9  | 10.5           | 10.5           | 3   | 5              | 0.7            | 1              | 0.15                     | 0.15                                  | 570                      | 187             | 58             | 19              | 56 000                          | 67 000              | F 603    | F 603 ZZ   | —       |
|                 | 10 | 11.5           | 11.5           | 4   | 4              | 1              | 1              | 0.15                     | 0.15                                  | 630                      | 218             | 64             | 22              | 50 000                          | 60 000              | F 623    | F 623 ZZ   | —       |
| 4               | 13 | 15             | 15             | 5   | 5              | 1              | 1              | 0.2                      | 0.2                                   | 1 300                    | 485             | 133            | 49              | 36 000                          | 43 000              | F 633    | F 633 ZZ   | —       |
|                 | 7  | 8.2            | —              | 2   | —              | 0.6            | —              | 0.1                      | —                                     | 310                      | 115             | 32             | 12              | 60 000                          | 67 000              | MF 74    | —          | —       |
|                 | 7  | —              | 8.2            | —   | 2.5            | —              | 0.6            | —                        | 0.1                                   | 255                      | 107             | 26             | 11              | 60 000                          | 71 000              | —        | MF 74 ZZ   | —       |
|                 | 8  | 9.2            | 9.2            | 2   | 3              | 0.6            | 0.6            | 0.15                     | 0.1                                   | 395                      | 139             | 40             | 14              | 56 000                          | 67 000              | MF 84    | MF 84 ZZ   | —       |
|                 | 9  | 10.3           | 10.3           | 2.5 | 4              | 0.6            | 1              | (0.15)                   | (0.15)                                | 640                      | 225             | 65             | 23              | 53 000                          | 63 000              | F 684    | F 684 ZZ   | —       |
|                 | 10 | 11.2           | 11.6           | 3   | 4              | 0.6            | 0.8            | 0.2                      | 0.15                                  | 710                      | 270             | 73             | 28              | 50 000                          | 60 000              | MF 104 B | MF 104 BZZ | —       |
|                 | 11 | 12.5           | 12.5           | 4   | 4              | 1              | 1              | 0.15                     | 0.15                                  | 960                      | 345             | 98             | 35              | 48 000                          | 56 000              | F 694    | F 694 ZZ   | —       |
|                 | 12 | 13.5           | 13.5           | 4   | 4              | 1              | 1              | 0.2                      | 0.2                                   | 960                      | 345             | 98             | 35              | 48 000                          | 56 000              | F 604    | F 604 ZZ   | —       |
|                 | 13 | 15             | 15             | 5   | 5              | 1              | 1              | 0.2                      | 0.2                                   | 1 300                    | 485             | 133            | 49              | 40 000                          | 48 000              | F 624    | F 624 ZZ   | —       |
|                 | 16 | 18             | 18             | 5   | 5              | 1              | 1              | 0.3                      | 0.3                                   | 1 730                    | 670             | 177            | 68              | 36 000                          | 43 000              | F 634    | F 634 ZZ1  | —       |

註 (1) ( )內的數值並非以JIS B 1521為基準。

備 註 欲將防塵蓋軸承使用於外輪旋轉之際，請提出諮詢。

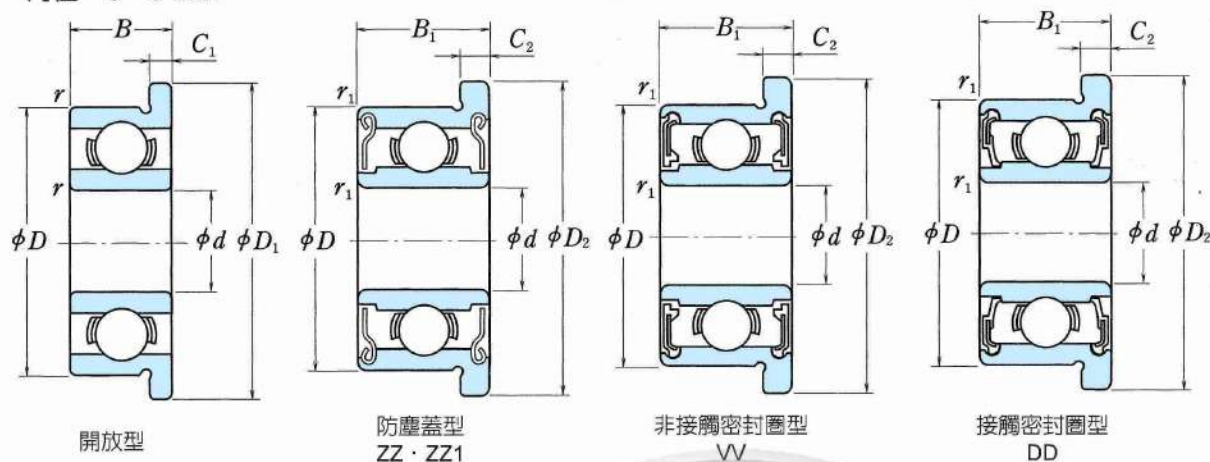


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# 小型滾珠軸承・微型滾珠軸承

公制系列 帶止動擋邊  
內徑 5~9 mm



| 主要尺寸 (mm) |    |                |                |     |                |                |                |      |                | 基本額定負荷 (N)     |                 |                |                 | 極限轉速 (min <sup>-1</sup> ) |        |           | 代號  |          |            |       |
|-----------|----|----------------|----------------|-----|----------------|----------------|----------------|------|----------------|----------------|-----------------|----------------|-----------------|---------------------------|--------|-----------|-----|----------|------------|-------|
| d         | D  | D <sub>1</sub> | D <sub>2</sub> | B   | B <sub>1</sub> | C <sub>1</sub> | C <sub>2</sub> | r    | r <sub>1</sub> | C <sub>r</sub> | C <sub>0r</sub> | C <sub>r</sub> | C <sub>0r</sub> | 開放型<br>Z·ZZ型<br>V·VV型     | D·DD型  | 開放型<br>Z型 | 開放型 | 防塵蓋型     | 密封圈型       | 密封圈型  |
| 5         | 8  | 9.2            | —              | 2   | —              | 0.6            | —              | 0.1  | —              | 310            | 120             | 31             | 12              | 53 000                    | —      | 63 000    |     | MF 85    | —          | —     |
|           | 8  | —              | 9.2            | —   | 2.5            | —              | 0.6            | —    | 0.1            | 278            | 131             | 28             | 13              | 53 000                    | —      | 63 000    |     | MF 85 ZZ | —          | —     |
|           | 9  | 10.2           | 10.2           | 2.5 | 3              | 0.6            | 0.6            | 0.15 | 0.15           | 430            | 168             | 44             | 17              | 50 000                    | —      | 60 000    |     | MF 95    | MF 95 ZZ1  | —     |
|           | 10 | 11.2           | 11.6           | 3   | 4              | 0.6            | 0.8            | 0.15 | 0.15           | 430            | 168             | 44             | 17              | 50 000                    | —      | 60 000    |     | MF 105   | MF 105 ZZ  | —     |
|           | 11 | 12.5           | 12.5           | 3   | 5              | 0.8            | 1              | 0.15 | 0.15           | 715            | 281             | 73             | 29              | 45 000                    | —      | 53 000    |     | F 685    | F 685 ZZ   | —     |
|           | 13 | 15             | 15             | 4   | 4              | 1              | 1              | 0.2  | 0.2            | 1 080          | 430             | 110            | 44              | 43 000                    | 40 000 | 50 000    |     | F 695    | F 695 ZZ   | VV DD |
|           | 14 | 16             | 16             | 5   | 5              | 1              | 1              | 0.2  | 0.2            | 1 330          | 505             | 135            | 52              | 40 000                    | 38 000 | 50 000    |     | F 605    | F 605 ZZ   | — DD  |
|           | 16 | 18             | 18             | 5   | 5              | 1              | 1              | 0.3  | 0.3            | 1 730          | 670             | 177            | 68              | 36 000                    | 32 000 | 43 000    |     | F 625    | F 625 ZZ1  | VV DD |
|           | 19 | 22             | 22             | 6   | 6              | 1.5            | 1.5            | 0.3  | 0.3            | 2 340          | 885             | 238            | 90              | 32 000                    | 30 000 | 40 000    |     | F 635    | F 635 ZZ1  | VV DD |
|           | 10 | 11.2           | 11.2           | 2.5 | 3              | 0.6            | 0.6            | 0.15 | 0.1            | 495            | 218             | 51             | 22              | 45 000                    | —      | 53 000    |     | MF 106   | MF 106 ZZ1 | —     |
|           | 12 | 13.2           | 13.6           | 3   | 4              | 0.6            | 0.8            | 0.2  | 0.15           | 715            | 292             | 73             | 30              | 43 000                    | 40 000 | 50 000    |     | MF 126   | MF 126 ZZ  | — DD  |
|           | 13 | 15             | 15             | 3.5 | 5              | 1              | 1.1            | 0.15 | 0.15           | 1 080          | 440             | 110            | 45              | 40 000                    | 38 000 | 50 000    |     | F 686 A  | F 686 AZZ  | VV DD |
| 6         | 15 | 17             | 17             | 5   | 5              | 1.2            | 1.2            | 0.2  | 0.2            | 1 730          | 670             | 177            | 68              | 40 000                    | 36 000 | 45 000    |     | F 696    | F 696 ZZ1  | VV DD |
|           | 17 | 19             | 19             | 6   | 6              | 1.2            | 1.2            | 0.3  | 0.3            | 2 260          | 835             | 231            | 85              | 38 000                    | 34 000 | 45 000    |     | F 606    | F 606 ZZ   | VV DD |
|           | 19 | 22             | 22             | 6   | 6              | 1.5            | 1.5            | 0.3  | 0.3            | 2 340          | 885             | 238            | 90              | 32 000                    | 30 000 | 40 000    |     | F 626    | F 626 ZZ1  | VV DD |
|           | 22 | 25             | 25             | 7   | 7              | 1.5            | 1.5            | 0.3  | 0.3            | 3 300          | 1 370           | 335            | 140             | 30 000                    | 28 000 | 36 000    |     | F 636    | F 636 ZZ   | VV DD |
|           | 11 | 12.2           | 12.2           | 2.5 | 3              | 0.6            | 0.6            | 0.15 | 0.1            | 455            | 201             | 47             | 21              | 43 000                    | —      | 50 000    |     | MF 117   | MF 117 ZZ  | —     |
|           | 13 | 14.2           | 14.6           | 3   | 4              | 0.6            | 0.8            | 0.2  | 0.15           | 540            | 276             | 55             | 28              | 40 000                    | —      | 48 000    |     | MF 137   | MF 137 ZZ  | —     |
|           | 14 | 16             | 16             | 3.5 | 5              | 1              | 1.1            | 0.15 | 0.15           | 1 170          | 510             | 120            | 52              | 40 000                    | 34 000 | 45 000    |     | F 687    | F 687 ZZ1  | VV DD |
|           | 17 | 19             | 19             | 5   | 5              | 1.2            | 1.2            | 0.3  | 0.3            | 1 610          | 715             | 164            | 73              | 36 000                    | 28 000 | 43 000    |     | F 697    | F 697 ZZ1  | VV DD |
|           | 19 | 22             | 22             | 6   | 6              | 1.5            | 1.5            | 0.3  | 0.3            | 2 340          | 885             | 238            | 90              | 36 000                    | 32 000 | 43 000    |     | F 607    | F 607 ZZ1  | VV DD |
|           | 22 | 25             | 25             | 7   | 7              | 1.5            | 1.5            | 0.3  | 0.3            | 3 300          | 1 370           | 335            | 140             | 30 000                    | 28 000 | 36 000    |     | F 627    | F 627 ZZ   | VV DD |
|           | 12 | 13.2           | 13.6           | 2.5 | 3.5            | 0.6            | 0.8            | 0.15 | 0.1            | 545            | 274             | 56             | 28              | 40 000                    | —      | 48 000    |     | MF 128   | MF 128 ZZ1 | —     |
|           | 14 | 15.6           | 15.6           | 3.5 | 4              | 0.8            | 0.8            | 0.2  | 0.15           | 820            | 385             | 83             | 39              | 38 000                    | 32 000 | 45 000    |     | MF 148   | MF 148 ZZ  | VV DD |
|           | 16 | 18             | 18             | 4   | 5              | 1              | 1.1            | 0.2  | 0.2            | 1 610          | 710             | 164            | 73              | 36 000                    | 30 000 | 43 000    |     | F 688 A  | F 688 AZZ  | VV DD |
| 8         | 19 | 22             | 22             | 6   | 6              | 1.5            | 1.5            | 0.3  | 0.3            | 2 240          | 910             | 228            | 93              | 36 000                    | 28 000 | 43 000    |     | F 698    | F 698 ZZ   | VV DD |
|           | 22 | 25             | 25             | 7   | 7              | 1.5            | 1.5            | 0.3  | 0.3            | 3 300          | 1 370           | 335            | 140             | 34 000                    | 28 000 | 40 000    |     | F 608    | F 608 ZZ   | VV DD |
|           | 17 | 19             | 19             | 4   | 5              | 1              | 1.1            | 0.2  | 0.2            | 1 330          | 665             | 136            | 68              | 36 000                    | 24 000 | 43 000    |     | F 689    | F 689 ZZ1  | VV DD |
|           | 20 | 23             | 23             | 6   | 6              | 1.5            | 1.5            | 0.3  | 0.3            | 1 720          | 840             | 175            | 86              | 34 000                    | 24 000 | 40 000    |     | F 699    | F 699 ZZ1  | VV DD |

註 (1) 有關開放型、防塵蓋型及非接觸密封圈型的數值。有關接觸密封圈型的數值，請向提出諮詢。

備註 欲將密封圈、防塵蓋軸承使用於外輪旋轉之際，請向提出諮詢。



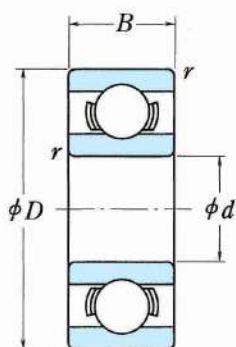
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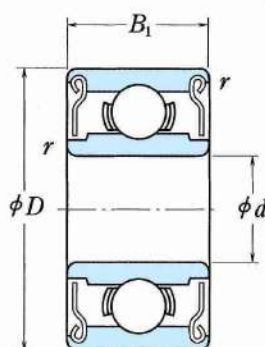
# 小型滾珠軸承・微型滾珠軸承

英制系列

內徑 1.016~9.525 mm



開放型



防塵蓋型  
ZZ・ZS

| 主要尺寸<br>(mm) |          |          |                       |                  | 基本額定負荷<br>(N) (kgf)   |                        |                       |                        | 極限轉速<br>(min <sup>-1</sup> ) |                  | 代 號    |           |
|--------------|----------|----------|-----------------------|------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------------|------------------|--------|-----------|
| <i>d</i>     | <i>D</i> | <i>B</i> | <i>B</i> <sub>1</sub> | <i>r</i><br>(最小) | <i>C</i> <sub>r</sub> | <i>C</i> <sub>0r</sub> | <i>C</i> <sub>r</sub> | <i>C</i> <sub>0r</sub> | 脂潤滑<br>開放型<br>Z・ZZ型          | 油潤滑<br>開放型<br>Z型 | 開放型    | 防塵蓋型      |
| 1.016        | 3.175    | 1.191    | —                     | 0.1              | 80                    | 23                     | 8                     | 2.5                    | 130 000                      | 150 000          | R 09   | —         |
| 1.191        | 3.967    | 1.588    | 2.380                 | 0.1              | 138                   | 35                     | 14                    | 3.5                    | 110 000                      | 130 000          | R 0    | R 0 ZZ    |
| 1.397        | 4.762    | 1.984    | 2.779                 | 0.1              | 231                   | 66                     | 24                    | 6.5                    | 90 000                       | 110 000          | R 1    | R 1 ZZ    |
| 1.984        | 6.350    | 2.380    | 3.571                 | 0.1              | 310                   | 108                    | 32                    | 11                     | 67 000                       | 80 000           | R 1-4  | R 1-4 ZZ  |
| 2.380        | 4.762    | 1.588    | —                     | 0.1              | 188                   | 60                     | 19                    | 6                      | 80 000                       | 95 000           | R 133  | —         |
|              | 4.762    | —        | 2.380                 | 0.1              | 143                   | 52                     | 15                    | 5.5                    | 80 000                       | 95 000           | —      | R 133 ZS  |
|              | 7.938    | 2.779    | 3.571                 | 0.15             | 550                   | 175                    | 56                    | 18                     | 60 000                       | 71 000           | R 1-5  | R 1-5 ZZ  |
| 3.175        | 6.350    | 2.380    | 2.779                 | 0.1              | 283                   | 95                     | 29                    | 9.5                    | 67 000                       | 80 000           | R 144  | R 144 ZZ  |
|              | 7.938    | 2.779    | 3.571                 | 0.1              | 560                   | 179                    | 57                    | 18                     | 60 000                       | 67 000           | R 2-5  | R 2-5 ZZ  |
|              | 9.525    | 2.779    | 3.571                 | 0.15             | 640                   | 225                    | 65                    | 23                     | 53 000                       | 63 000           | R 2-6  | R 2-6 ZS  |
|              | 9.525    | 3.967    | 3.967                 | 0.3              | 630                   | 218                    | 64                    | 22                     | 56 000                       | 67 000           | R 2    | R 2 ZZ    |
| 3.967        | 12.700   | 4.366    | 4.366                 | 0.3              | 640                   | 225                    | 65                    | 23                     | 53 000                       | 63 000           | R 2A   | R 2A ZZ   |
|              | 7.938    | 2.779    | 3.175                 | 0.1              | 360                   | 149                    | 37                    | 15                     | 53 000                       | 63 000           | R 155  | R 155 ZS  |
| 4.762        | 7.938    | 2.779    | 3.175                 | 0.1              | 360                   | 149                    | 37                    | 15                     | 53 000                       | 63 000           | R 156  | R 156 ZS  |
|              | 9.525    | 3.175    | 3.175                 | 0.1              | 710                   | 270                    | 73                    | 28                     | 50 000                       | 60 000           | R 166  | R 166 ZZ  |
|              | 12.700   | 3.967    | 4.978                 | 0.3              | 1 300                 | 485                    | 133                   | 49                     | 43 000                       | 53 000           | R 3    | R 3 ZZ    |
| 6.350        | 9.525    | 3.175    | 3.175                 | 0.1              | 420                   | 204                    | 43                    | 21                     | 48 000                       | 56 000           | R 168B | R 168 BZZ |
|              | 12.700   | 3.175    | 4.762                 | 0.15             | 1 080                 | 440                    | 110                   | 45                     | 40 000                       | 50 000           | R 188  | R 188 ZZ  |
|              | 15.875   | 4.978    | 4.978                 | 0.3              | 1 610                 | 660                    | 164                   | 68                     | 38 000                       | 45 000           | R 4B   | R 4B ZZ   |
|              | 19.050   | 5.558    | 7.142                 | 0.4              | 2 620                 | 1 060                  | 267                   | 108                    | 36 000                       | 43 000           | R 4AA  | R 4AA ZZ  |
| 7.938        | 12.700   | 3.967    | 3.967                 | 0.15             | 540                   | 276                    | 55                    | 28                     | 40 000                       | 48 000           | R 1810 | R 1810 ZZ |
| 9.525        | 22.225   | 5.558    | 7.142                 | 0.4              | 3 350                 | 1 410                  | 340                   | 144                    | 32 000                       | 38 000           | R 6    | R 6 ZZ    |

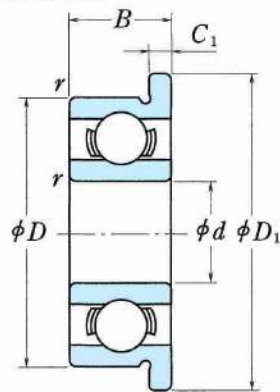
備 註 欲將防塵蓋軸承使用於外輪旋轉之際，請提出諮詢。



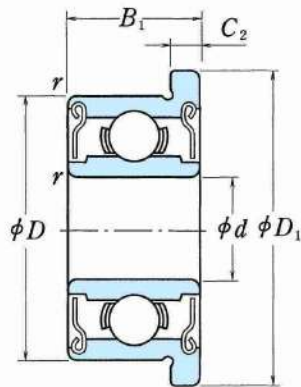
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小型滾珠軸承・微型滾珠軸承

英制系列 帶止動擋邊  
內徑 1.191~9.525 mm



開放型



防塵蓋型  
ZZ・ZZS

| 主要尺寸<br>(mm) |        |                |       |                |                |                |           | 基本額定負荷<br>(N)  |                 |                |                 | 極限轉速<br>(min <sup>-1</sup> ) |                   | 代 號     |            |
|--------------|--------|----------------|-------|----------------|----------------|----------------|-----------|----------------|-----------------|----------------|-----------------|------------------------------|-------------------|---------|------------|
| d            | D      | D <sub>1</sub> | B     | B <sub>1</sub> | C <sub>1</sub> | C <sub>2</sub> | r<br>(最小) | C <sub>r</sub> | C <sub>0r</sub> | C <sub>r</sub> | C <sub>0r</sub> | 脂潤滑<br>開放型<br>Z, ZZ型         | 油潤滑<br>開放型<br>Z 型 | 開放型     | 防塵蓋型       |
| 1.191        | 3.967  | 5.156          | 1.588 | 2.380          | 0.330          | 0.790          | 0.1       | 138            | 35              | 14             | 3.5             | 110 000                      | 130 000           | FR 0    | FR 0 ZZ    |
| 1.397        | 4.762  | 5.944          | 1.984 | 2.779          | 0.580          | 0.790          | 0.1       | 231            | 66              | 24             | 6.5             | 90 000                       | 110 000           | FR 1    | FR 1 ZZ    |
| 1.984        | 6.350  | 7.518          | 2.380 | 3.571          | 0.580          | 0.790          | 0.1       | 310            | 108             | 32             | 11              | 67 000                       | 80 000            | FR 1-4  | FR 1-4 ZZ  |
| 2.380        | 4.762  | 5.944          | 1.588 | —              | 0.460          | —              | 0.1       | 188            | 60              | 19             | 6               | 80 000                       | 95 000            | FR 133  | —          |
|              | 4.762  | 5.944          | —     | 2.380          | —              | 0.790          | 0.1       | 143            | 52              | 15             | 5.5             | 80 000                       | 95 000            | —       | FR 133 ZZS |
|              | 7.938  | 9.119          | 2.779 | 3.571          | 0.580          | 0.790          | 0.15      | 550            | 175             | 56             | 18              | 60 000                       | 71 000            | FR 1-5  | FR 1-5 ZZ  |
| 3.175        | 6.350  | 7.518          | 2.380 | 2.779          | 0.580          | 0.790          | 0.1       | 283            | 95              | 29             | 9.5             | 67 000                       | 80 000            | FR 144  | FR 144 ZZ  |
|              | 7.938  | 9.119          | 2.779 | 3.571          | 0.580          | 0.790          | 0.1       | 560            | 179             | 57             | 18              | 60 000                       | 67 000            | FR 2-5  | FR 2-5 ZZ  |
|              | 9.525  | 10.719         | 2.779 | 3.571          | 0.580          | 0.790          | 0.15      | 640            | 225             | 65             | 23              | 53 000                       | 63 000            | FR 2-6  | FR 2-6 ZZS |
|              | 9.525  | 11.176         | 3.967 | 3.967          | 0.760          | 0.760          | 0.3       | 630            | 218             | 64             | 22              | 56 000                       | 67 000            | FR 2    | FR 2 ZZ    |
| 3.967        | 7.938  | 9.119          | 2.779 | 3.175          | 0.580          | 0.910          | 0.1       | 360            | 149             | 37             | 15              | 53 000                       | 63 000            | FR 155  | FR 155 ZZS |
| 4.762        | 7.938  | 9.119          | 2.779 | 3.175          | 0.580          | 0.910          | 0.1       | 360            | 149             | 37             | 15              | 53 000                       | 63 000            | FR 156  | FR 156 ZZS |
|              | 9.525  | 10.719         | 3.175 | 3.175          | 0.580          | 0.790          | 0.1       | 710            | 270             | 73             | 28              | 50 000                       | 60 000            | FR 166  | FR 166 ZZ  |
|              | 12.700 | 14.351         | 4.978 | 4.978          | 1.070          | 1.070          | 0.3       | 1 300          | 485             | 133            | 49              | 43 000                       | 53 000            | FR 3    | FR 3 ZZ    |
| 6.350        | 9.525  | 10.719         | 3.175 | 3.175          | 0.580          | 0.910          | 0.1       | 420            | 204             | 43             | 21              | 48 000                       | 56 000            | FR 168B | FR 168 BZZ |
|              | 12.700 | 13.894         | 3.175 | 4.762          | 0.580          | 1.140          | 0.15      | 1 080          | 440             | 110            | 45              | 40 000                       | 50 000            | FR 188  | FR 188 ZZ  |
|              | 15.875 | 17.526         | 4.978 | 4.978          | 1.070          | 1.070          | 0.3       | 1 610          | 660             | 164            | 68              | 38 000                       | 45 000            | FR 4B   | FR 4B ZZ   |
| 7.938        | 12.700 | 13.894         | 3.967 | 3.967          | 0.790          | 0.790          | 0.15      | 540            | 276             | 55             | 28              | 40 000                       | 48 000            | FR 1810 | FR 1810 ZZ |
| 9.525        | 22.225 | 24.613         | 7.142 | 7.142          | 1.570          | 1.570          | 0.4       | 3 350          | 1 410           | 340            | 144             | 32 000                       | 38 000            | FR 6    | FR 6 ZZ    |

備 註 欲將防塵蓋軸承使用於外輪旋轉之際，請提出諮詢。



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