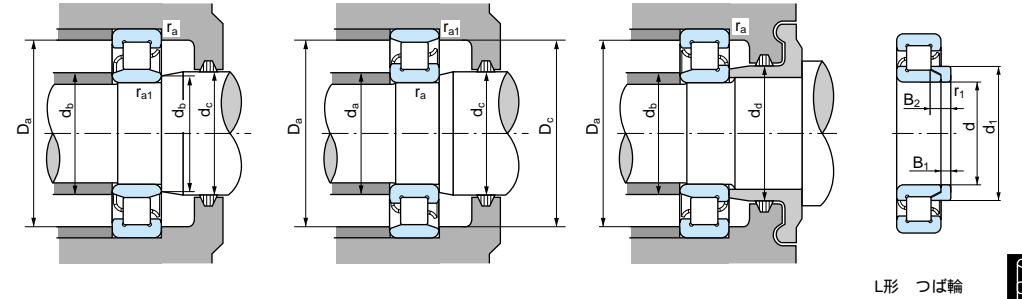
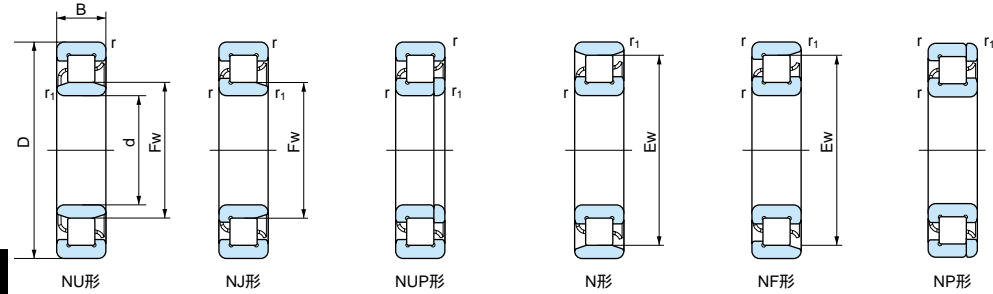




円筒ころ軸受

内径：45～65mm

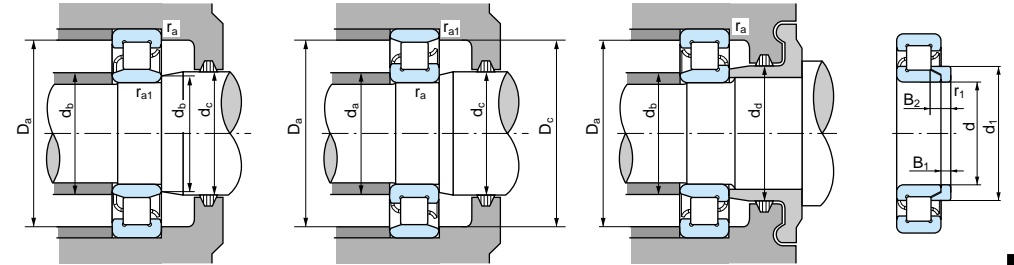
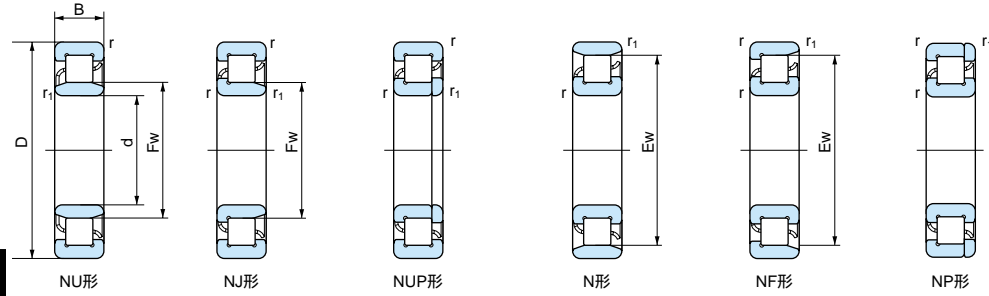


1N = 0.102kgf

| 主要寸法 (mm) |     |     |       |      |      | 呼び番号 |            |         |     |     |    | 基本動定格荷重 |        |         |        | 基本静定格荷重 |       |      |      | 許容回転数 (rpm) <sup>(1)</sup> |       |      |      | 取付関係寸法 (mm) |       |       |       |           |          | 質量 (kg)  |      | L形つば軸寸法 (mm) |         |       |       |       |  |
|-----------|-----|-----|-------|------|------|------|------------|---------|-----|-----|----|---------|--------|---------|--------|---------|-------|------|------|----------------------------|-------|------|------|-------------|-------|-------|-------|-----------|----------|----------|------|--------------|---------|-------|-------|-------|--|
| d         | D   | B   | Ew    | Fw   | r    | r1   | NU         | NJ      | NUP | N   | NF | NP      | Cr (N) | Cor (N) | グリス潤滑  | 油潤滑     | da    | db   | dc   | dd                         | Da    | Db   | ra   | ra1         | NU    | N     | 呼び番号  | d         | d1       | B1       | B2   | r1           | 質量 (kg) |       |       |       |  |
|           |     |     |       |      |      | (最小) | (最小)       |         |     |     |    |         |        |         |        |         |       | (最小) | (最大) | (最小)                       | (最大)  | (最小) | (最大) | (最小)        | (最大)  | (最小)  | (最大)  | (最小)      | (最大)     | (最小)     | (最大) | (最大)         | (最小)    | 参考    |       |       |  |
| 45        | 75  | 16  | 67.5  | 52.5 | 1    | 0.6  | NU 1009    |         |     |     | N  |         | 29700  | 32000   | 9000   | 11000   | 50    | 50   | 52   | 54                         | 69    | 71   | 68   | 1           | 0.6   | 0.284 | 0.289 | HJ 209    | 45       | 59       | 5    | 9.5          | 1.1     | 0.054 |       |       |  |
|           | 85  | 19  | 75    | 55   | 1.1  | 1.1  | NU 209     | NJ      | NUP | N   | NF | NP      | 46000  | 47000   | 7500   | 9000    | 52    | 52   | 54   | 57                         | 61    | 78   | 78   | 1           | 1     | 0.430 | 0.420 | HJ 209 E  | 45       | 59.1     | 5    | 8.5          | 1.1     | 0.053 |       |       |  |
|           | 85  | 23  |       | 54.5 | 1.1  | 1.1  | NU 209 EG  | NJ      | NUP |     |    |         | 63000  | 66500   | 7000   | 8500    | 52    | 54   | 57   | 61                         | 78    |      |      | 1           | 1     | 0.440 |       | HJ 2209   | 45       | 59       | 5    | 9.5          | 1.1     | 0.054 |       |       |  |
|           | 85  | 23  |       | 55   | 1.1  | 1.1  | NU 2209    | NJ      | NUP |     |    |         | 61500  | 67500   | 7400   | 8900    | 52    | 54   | 57   | 61                         | 78    |      |      | 1           | 1     | 0.536 |       | HJ 2209 E | 45       | 59.1     | 5    | 9            | 1.1     | 0.054 |       |       |  |
|           | 85  | 23  |       | 54.5 | 1.1  | 1.1  | NU 2209 EG | NJ      | NUP |     |    |         | 76000  | 84500   | 7000   | 8500    | 52    | 54   | 57   | 61                         | 78    |      |      | 1           | 1     | 0.593 |       | HJ 309    | 45       | 64       | 7    | 12.5         | 1.5     | 0.105 |       |       |  |
|           | 100 | 25  | 86.5  | 58.5 | 1.5  | 1.5  | NU 309     | NJ      | NUP |     | N  | NF      | NP     | 78500   | 77500  | 6300    | 7500  | 53.5 | 57   | 60                         | 66    | 91.5 | 91.5 | 1.5         | 1.5   | 0.871 | 0.850 | HJ 309 E  | 45       | 64.5     | 7    | 11.5         | 1.5     | 0.103 |       |       |  |
|           | 100 | 25  |       | 58.5 | 1.5  | 1.5  | NU 309 EG  | NJ      | NUP |     |    |         | 97500  | 98500   | 6000   | 7200    | 53.5  | 57   | 60   | 66                         | 91.5  |      |      | 1.5         | 1.5   | 0.910 |       | HJ 2309   | 45       | 64       | 7    | 15           | 1.5     | 0.115 |       |       |  |
|           | 100 | 36  |       | 58.5 | 1.5  | 1.5  | NU 2309    | NJ      | NUP |     |    |         | 99000  | 104000  | 6100   | 7300    | 53.5  | 57   | 60   | 66                         | 91.5  |      |      | 1.5         | 1.5   | 1.25  |       | HJ 2309 E | 45       | 64.5     | 7    | 13           | 1.5     | 0.112 |       |       |  |
|           | 100 | 36  |       | 58.5 | 1.5  | 1.5  | NU 2309 E  | NJ      | NUP |     |    |         | 137000 | 153000  | 6000   | 7200    | 53.5  | 57   | 60   | 66                         | 91.5  |      |      | 1.5         | 1.5   | 1.40  |       | HJ 409    | 45       | 64.5     | 7    | 13           | 1.5     | 0.112 |       |       |  |
|           | 120 | 29  | 100.5 | 64.5 | 2    | 2    | NU 409     | NJ      | NUP |     | N  | NF      | NP     | 107000  | 102000 | 5600    | 6700  | 55   | 55   | 63                         | 66    | 74   | 110  | 102         | 2     | 2     | 1.67  | 1.64      |          | 45       | 71.8 | 8            | 13.5    | 2     | 0.176 |       |  |
|           | 50  | 80  | 16    | 72.5 | 57.5 | 1    | 0.6        | NU 1010 |     |     |    | N       |        | 32000   | 36000  | 8500    | 10000 | 53   | 55   | 57                         | 59    | 74   | 76   | 73          | 1     | 0.6   | 0.310 | 0.306     | HJ 210   | 50       | 64.6 | 5            | 10      | 1.1   | 0.063 |       |  |
|           |     | 90  | 20    | 80.4 | 60.4 | 1.1  | 1.1        | NU 210  | NJ  | NUP |    | N       | NF     | NP      | 48000  | 51000   | 7000  | 8500 | 57   | 57                         | 58    | 62   | 67   | 83          | 83    | 1     | 1     | 0.481     | 0.470    | HJ 210 E | 50   | 64.1         | 5       | 9     | 1.1   | 0.059 |  |
| 90        |     | 20  |       | 59.5 | 1.1  | 1.1  | NU 210 EG  | NJ      | NUP |     |    |         | 66000  | 72000   | 6400   | 7700    | 57    | 58   | 62   | 67                         | 83    |      |      | 1           | 1     | 0.490 |       | HJ 2210   | 50       | 64.6     | 5    | 9.5          | 1.1     | 0.062 |       |       |  |
| 90        |     | 23  |       | 60.4 | 1.1  | 1.1  | NU 2210    | NJ      | NUP |     |    |         | 64000  | 73500   | 6500   | 7800    | 57    | 58   | 62   | 67                         | 83    |      |      | 1           | 1     | 0.580 |       | HJ 2210 E | 50       | 64.1     | 5    | 9            | 1.1     | 0.059 |       |       |  |
| 90        |     | 23  |       | 59.5 | 1.1  | 1.1  | NU 2210 EG | NJ      | NUP |     |    |         | 79500  | 91500   | 6400   | 7700    | 57    | 58   | 62   | 67                         | 83    |      |      | 1           | 1     | 0.632 |       | HJ 310    | 50       | 71       | 8    | 14           | 2       | 0.145 |       |       |  |
| 110       |     | 27  | 95    | 65   | 2    | 2    | NU 310     | NJ      | NUP |     | N  | NF      | NP     | 86500   | 86000  | 5600    | 6700  | 60   | 60   | 63                         | 67    | 73   | 100  | 98          | 2     | 2     | 1.17  | 1.14      | HJ 310 E | 50       | 71.4 | 8            | 13      | 2     | 0.145 |       |  |
| 110       |     | 27  |       | 65   | 2    | 2    | NU 310 EG  | NJ      | NUP |     |    |         | 110000 | 113000  | 5400   | 6500    | 60    | 63   | 67   | 73                         | 100   |      |      | 2           | 2     | 1.17  |       | HJ 2310   | 50       | 71       | 8    | 17           | 2       | 0.159 |       |       |  |
| 110       |     | 40  |       | 65   | 2    | 2    | NU 2310    | NJ      | NUP |     |    |         | 120000 | 131000  | 5400   | 6500    | 60    | 63   | 67   | 73                         | 100   |      |      | 2           | 2     | 1.69  |       | HJ 2310 E | 50       | 71.4     | 8    | 14.5         | 2       | 0.152 |       |       |  |
| 110       |     | 40  |       | 65   | 2    | 2    | NU 2310 E  | NJ      | NUP |     |    |         | 162000 | 187000  | 5400   | 6500    | 60    | 63   | 67   | 73                         | 100   |      |      | 2           | 2     | 1.85  |       | HJ 410    | 50       | 71.8     | 9    | 14.5         | 2.1     | 0.230 |       |       |  |
| 130       |     | 31  | 110.8 | 70.8 | 2.1  | 2.1  | NU 410     | NJ      | NUP |     | N  | NF      | NP     | 138000  | 136000 | 5000    | 6000  | 62   | 62   | 69                         | 73    | 81   | 118  | 112         | 2     | 2     | 2.05  | 2.01      |          |          |      |              |         |       |       |       |  |
| 55        |     | 90  | 18    | 80.5 | 64.5 | 1.1  | 1          | NU 1011 |     |     |    | N       |        | 36000   | 41500  | 7500    | 9000  | 61.5 | 61   | 63                         | 66    | 83   | 85   | 81.5        | 1     | 1     | 0.449 | 0.445     | HJ 211   | 55       | 70.8 | 6            | 11      | 1.1   | 0.086 |       |  |
|           |     | 100 | 21    | 88.5 | 66.5 | 1.5  | 1.1        | NU 211  | NJ  | NUP |    | N       | NF     | NP      | 59000  | 62000   | 6300  | 7500 | 63.5 | 62                         | 65    | 68   | 73   | 91.5        | 93    | 1.5   | 1     | 0.634     | 0.630    | HJ 211 E | 55   | 70.9         | 6       | 9.5   | 1.1   | 0.083 |  |
|           | 100 | 21  |       | 66   | 1.5  | 1.1  | NU 211 EG  | NJ      | NUP |     |    |         | 82500  | 93000   | 5800   | 7000    | 62    | 65   | 68   | 73                         | 91.5  |      |      | 1.5         | 1     | 0.670 |       | HJ 2211   | 55       | 70.8     | 6    | 11           | 1.1     | 0.086 |       |       |  |
|           | 100 | 25  |       | 66.5 | 1.5  | 1.1  | NU 2211    | NJ      | NUP |     |    |         | 75000  | 87000   | 6200   | 7400    | 62    | 65   | 68   | 73                         | 91.5  |      |      | 1.5         | 1     | 0.780 |       | HJ 2211 E | 55       | 70.9     | 6    | 10           | 1.1     | 0.085 |       |       |  |
|           | 100 | 25  |       | 66   | 1.5  | 1.1  | NU 2211 EG | NJ      | NUP |     |    |         | 97000  | 114000  | 5800   | 7000    | 62    | 65   | 68   | 73                         | 91.5  |      |      | 1.5         | 1     | 0.870 |       | HJ 311    | 55       | 77.2     | 9    | 15           | 2       | 0.186 |       |       |  |
|           | 120 | 29  | 104.5 | 70.5 | 2    | 2    | NU 311     | NJ      | NUP |     | N  | NF      | NP     | 110000  | 111000 | 5000    | 6000  | 65   | 65   | 69                         | 72    | 80   | 110  | 107         | 2     | 2     | 1.43  | 1.40      | HJ 311 E | 55       | 77.2 | 9            | 14      | 2     | 0.186 |       |  |
|           | 120 | 29  |       | 70.5 | 2    | 2    | NU 311 EG  | NJ      | NUP |     |    |         | 137000 | 143000  | 4800   | 5600    | 65    | 69   | 72   | 80                         | 110   |      |      | 2           | 2     | 1.50  |       | HJ 2311   | 55       | 77.2     | 9    | 15.5         | 2       | 0.195 |       |       |  |
|           | 120 | 43  |       | 70.5 | 2    | 2    | NU 2311    | NJ      | NUP |     |    |         | 148000 | 162000  | 4800   | 5600    | 65    | 69   | 72   | 80                         | 110   |      |      | 2           | 2     | 2.10  |       | HJ 2311 E | 55       | 77.2     | 9    | 18.5         | 2       | 0.206 |       |       |  |
|           | 120 | 43  |       | 70.5 | 2    | 2    | NU 2311 E  | NJ      | NUP |     |    |         | 201000 | 233000  | 4800   | 5600    | 65    | 69   | 72   | 80                         | 110   |      |      | 2           | 2     | 2.35  |       | HJ 411    | 55       | 77.6     | 9    | 15.5         | 2       | 0.195 |       |       |  |
|           | 140 | 33  | 117.2 | 77.2 | 2.1  | 2.1  | NU 411     | NJ      | NUP |     | N  | NF      | NP     | 139000  | 138000 | 4800    | 5600  | 67   | 67   | 76                         | 79    | 87   | 128  | 119         | 2     | 2     | 2.54  | 2.51      |          |          |      |              |         |       |       |       |  |
|           | 60  | 95  | 18    | 85.5 | 69.5 | 1.1  | 1          | NU 1012 |     |     |    | N       |        | 37000   | 44000  | 6700    | 8000  | 66.5 | 66   | 68                         | 71    | 88   | 90   | 86.5        | 1     | 1     | 0.484 | 0.477     | HJ 212   | 60       | 78.4 | 6            | 11      | 1.5   | 0.109 |       |  |
|           |     | 110 | 22    | 97.5 | 73.5 | 1.5  | 1.5        | NU 212  | NJ  | NUP |    | N       | NF     | NP      | 68500  | 75000   | 5600  | 6700 | 68.5 | 68.5                       | 71    | 75   | 80   | 101.5       | 101.5 | 1.5   | 1.5   | 0.835     | 0.820    | HJ 212 E | 60   | 77.7         | 6       | 10    | 1.5   | 0.104 |  |
| 110       |     | 22  |       | 72   | 1.5  | 1.5  | NU 212 E   | NJ      | NUP |     |    |         | 97500  | 107000  | 5000   | 6000    | 68.5  | 71   | 75   | 80                         | 101.5 |      |      | 1.5         | 1.5   | 0.921 |       | HJ 2212   | 60       | 78.4     | 6    | 11           | 1.5     | 0.109 |       |       |  |
| 110       |     | 28  |       | 73.5 | 1.5  | 1.5  | NU 2212    | NJ      | NUP |     |    |         | 96000  | 116000  | 5300   | 6300    | 68.5  | 71   | 75   | 80                         | 101.5 |      |      | 1.5         | 1.5   | 1.07  |       | HJ 2212 E | 60       | 77.7     | 6    | 10           | 1.5     | 0.104 |       |       |  |
| 110       |     | 28  |       | 77   | 1.5  | 1.5  | NU 2212 E  | NJ      | NUP |     |    |         | 131000 | 157000  | 5000   | 6000    | 68.5  | 71   | 75   | 80                         | 101.5 |      |      | 1.5         | 1.5   | 1.23  |       | HJ 312    | 60       | 84.2     | 9    | 15.5         | 2.1     | 0.224 |       |       |  |
| 130       |     | 31  | 113   | 77   | 2.1  | 2.1  | NU 312     | NJ      | NUP |     | N  | NF      | NP     | 123000  | 126000 | 4800    | 5600  | 72   | 72   | 75                         | 79    | 86   | 118  | 118         | 116   | 2     | 2     | 1.82      | 1.78     | HJ 312 E | 60   | 84.5         | 9       | 14.5  | 2.1   | 0.222 |  |
| 130       |     | 31  |       | 77   | 2.1  | 2.1  | NU 312 EG  | NJ      | NUP |     |    |         | 150000 | 157000  | 4200   | 4800    | 72    | 75   | 79   | 86                         | 118   |      |      | 2           | 2     | 1.87  |       | HJ 2312   | 60       | 84.2     | 9    | 19           | 2.1     | 0.248 |       |       |  |
| 130       |     | 46  |       | 77   | 2.1  | 2.1  | NU 2312    | NJ      | NUP |     |    |         | 168000 | 188000  | 4300   | 5000    | 72    | 75   | 79   | 86                         | 118   |      |      | 2           | 2     | 2.69  |       | HJ 2312 E | 60       | 84.5     | 9    | 16           | 2.1     | 0.232 |       |       |  |
| 130       |     | 46  |       | 77   | 2.1  | 2.1  | NU 2312 E  | NJ      | NUP |     |    |         | 222000 | 262000  | 4200   | 4800    | 72    | 75   | 79   | 86                         | 118   |      |      |             |       |       |       |           |          |          |      |              |         |       |       |       |  |

## 円筒ころ軸受

内径：70～90mm



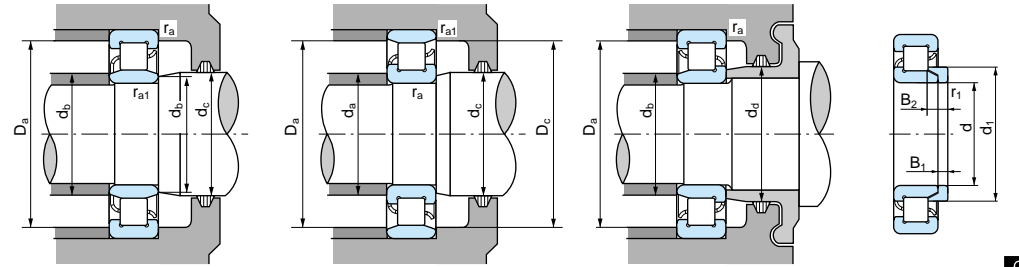
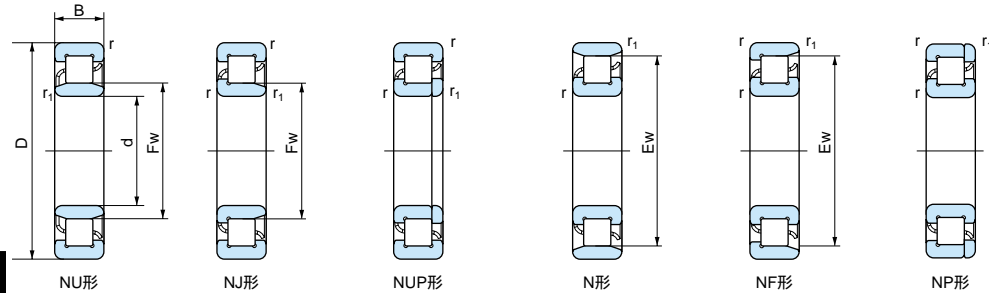
L形 つば輪

1N = 0.102kgf

| 主要寸法 (mm) |     |    |       |       |           | 呼び番号                   |           |    |     |   |    | 基本動定格荷重 |        | 基本静定格荷重 |                            | 許容回転数 (rpm) <sup>(1)</sup> |                        | 取付関係寸法 (mm)            |                        |                        |                        |                        |                        | 質量 (kg)                 |     | L形つば輪寸法 (mm) |       |           |                        |                |                |                        |               |                        |                        |
|-----------|-----|----|-------|-------|-----------|------------------------|-----------|----|-----|---|----|---------|--------|---------|----------------------------|----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|-----|--------------|-------|-----------|------------------------|----------------|----------------|------------------------|---------------|------------------------|------------------------|
| d         | D   | B  | Ew    | Fw    | r<br>(最小) | r <sub>1</sub><br>(最小) | NU        | NJ | NUP | N | NF | NP      | Cr(N)  | Cor(N)  | 許容回転数 (rpm) <sup>(1)</sup> |                            | d <sub>a</sub><br>(最小) | d <sub>b</sub><br>(最小) | d <sub>c</sub><br>(最大) | d <sub>d</sub><br>(最小) | D <sub>a</sub><br>(最大) | D <sub>b</sub><br>(最大) | r <sub>a</sub><br>(最小) | r <sub>a1</sub><br>(最大) | NU  | N            | 呼び番号  | d         | d <sub>1</sub><br>(最大) | B <sub>1</sub> | B <sub>2</sub> | r <sub>1</sub><br>(最小) | 質量 (kg)<br>参考 |                        |                        |
|           |     |    |       |       |           |                        |           |    |     |   |    |         |        |         | グリース                       | 油潤滑                        |                        |                        |                        |                        |                        |                        |                        |                         |     |              |       |           |                        |                |                |                        |               | d <sub>a</sub><br>(最大) | D <sub>b</sub><br>(最小) |
| 70        | 110 | 20 | 100   | 80    | 1.1       | 1                      | NU 1014   |    |     | N |    |         | 55500  | 67000   | 6000                       | 7000                       | 76.5                   | 76                     | 78                     | 82                     | 103                    | 105                    | 100.5                  | 1                       | 1   | 0.712        | 0.702 | HJ 214    | 70                     | 89.6           | 7              | 12.5                   | 1.5           | 0.154                  |                        |
|           | 125 | 24 | 110.5 | 84.5  | 1.5       | 1.5                    | NU 214    | NJ | NUP | N | NF | NP      | 83000  | 95000   | 5000                       | 6000                       | 78.5                   | 78.5                   | 82                     | 86                     | 116.5                  | 116.5                  | 114                    | 1.5                     | 1.5 | 1.16         | 1.14  | HJ 214 E  | 70                     | 89.5           | 7              | 11                     | 1.5           | 0.149                  |                        |
|           | 125 | 24 |       | 83.5  | 1.5       | 1.5                    | NU 214 E  | NJ | NUP | N |    |         | 119000 | 137000  | 4600                       | 5500                       | 78.5                   | 82                     | 86                     | 92                     | 116.5                  |                        |                        | 1.5                     | 1.5 | 1.26         |       | HJ 2214   | 70                     | 89.6           | 7              | 12.5                   | 1.5           | 0.154                  |                        |
|           | 125 | 31 |       | 84.5  | 1.5       | 1.5                    | NU 2214   | NJ | NUP | N |    |         | 119000 | 151000  | 4800                       | 5600                       | 78.5                   | 82                     | 86                     | 92                     | 116.5                  |                        |                        | 1.5                     | 1.5 | 1.52         |       | HJ 2214 E | 70                     | 89.5           | 7              | 11.5                   | 1.5           | 0.152                  |                        |
|           | 125 | 31 |       | 83.5  | 1.5       | 1.5                    | NU 2214 E | NJ | NUP | N |    |         | 156000 | 194000  | 4600                       | 5500                       | 78.5                   | 82                     | 86                     | 92                     | 116.5                  |                        |                        | 1.5                     | 1.5 | 1.68         |       | HJ 314    | 70                     | 98             | 10             | 17.5                   | 2.1           | 0.336                  |                        |
|           | 150 | 35 | 130   | 90    | 2.1       | 2.1                    | NU 314    | NJ | NUP | N | NF | NP      | 158000 | 220000  | 4000                       | 4800                       | 82                     | 82                     | 87                     | 92                     | 100                    | 138                    | 138                    | 2                       | 2   | 2.73         | 2.68  | HJ 314 E  | 70                     | 97.5           | 10             | 15.5                   | 2.1           | 0.315                  |                        |
|           | 150 | 35 |       | 89    | 2.1       | 2.1                    | NU 314 E  | NJ | NUP | N |    |         | 205000 | 222000  | 3600                       | 4300                       | 82                     | 87                     | 92                     | 100                    | 138                    |                        |                        | 2                       | 2   | 3.15         |       | HJ 2314   | 70                     | 98             | 10             | 20.5                   | 2.1           | 0.362                  |                        |
|           | 150 | 51 |       | 90    | 2.1       | 2.1                    | NU 2314   | NJ | NUP | N |    |         | 223000 | 262000  | 3800                       | 4500                       | 82                     | 87                     | 92                     | 100                    | 138                    |                        |                        | 2                       | 2   | 3.97         |       | HJ 2314 E | 70                     | 97.5           | 10             | 18.5                   | 2.1           | 0.343                  |                        |
|           | 150 | 51 |       | 89    | 2.1       | 2.1                    | NU 2314 E | NJ | NUP | N |    |         | 274000 | 320000  | 3600                       | 4300                       | 82                     | 87                     | 92                     | 100                    | 138                    |                        |                        | 2                       | 2   | 4.30         |       | HJ 414    | 70                     | 110.5          | 12             | 20                     | 3             | 0.607                  |                        |
|           | 180 | 42 | 152   | 100   | 3         | 3                      | NU 414    | NJ | NUP | N | NF | NP      | 228000 | 235000  | 3600                       | 4300                       | 84                     | 84                     | 99                     | 102                    | 112                    | 166                    | 166                    | 153                     | 2.5 | 2.5          | 5.40  | 5.26      |                        |                |                |                        |               |                        |                        |
| 75        | 115 | 20 | 105   | 85    | 1.1       | 1                      | NU 1015   |    |     | N |    |         | 57500  | 71000   | 5600                       | 6700                       | 81.5                   | 81                     | 83                     | 87                     | 108                    | 110                    | 105.5                  | 1                       | 1   | 0.745        | 0.735 | HJ 215    | 75                     | 94             | 7              | 12.5                   | 1.5           | 0.161                  |                        |
|           | 130 | 25 | 116.5 | 88.5  | 1.5       | 1.5                    | NU 215    | NJ | NUP | N | NF | NP      | 96000  | 111000  | 4800                       | 5600                       | 83.5                   | 83.5                   | 87                     | 90                     | 96                     | 121.5                  | 121.5                  | 1.5                     | 1.5 | 1.24         | 1.22  | HJ 215 E  | 75                     | 94.5           | 7              | 11                     | 1.5           | 0.159                  |                        |
|           | 130 | 25 |       | 88.5  | 1.5       | 1.5                    | NU 215 E  | NJ | NUP | N |    |         | 130000 | 156000  | 4300                       | 5200                       | 83.5                   | 87                     | 90                     | 96                     | 121.5                  |                        |                        | 1.5                     | 1.5 | 1.38         |       | HJ 2215   | 75                     | 94             | 7              | 12.5                   | 1.5           | 0.161                  |                        |
|           | 130 | 31 |       | 88.5  | 1.5       | 1.5                    | NU 2215   | NJ | NUP | N |    |         | 129000 | 162000  | 4500                       | 5300                       | 83.5                   | 87                     | 90                     | 96                     | 121.5                  |                        |                        | 1.5                     | 1.5 | 1.57         |       | HJ 2215 E | 75                     | 94.5           | 7              | 11.5                   | 1.5           | 0.162                  |                        |
|           | 130 | 31 |       | 88.5  | 1.5       | 1.5                    | NU 2215 E | NJ | NUP | N |    |         | 161000 | 207000  | 4300                       | 5200                       | 83.5                   | 87                     | 90                     | 96                     | 121.5                  |                        |                        | 1.5                     | 1.5 | 1.80         |       | HJ 315    | 75                     | 104.2          | 11             | 18.5                   | 2.1           | 0.406                  |                        |
|           | 160 | 37 | 139.5 | 95.5  | 2.1       | 2.1                    | NU 315    | NJ | NUP | N | NF | NP      | 190000 | 205000  | 3800                       | 4500                       | 87                     | 87                     | 93                     | 97                     | 106                    | 148                    | 148                    | 2                       | 2   | 3.21         | 3.15  | HJ 315 E  | 75                     | 104.2          | 11             | 16.5                   | 2.1           | 0.389                  |                        |
|           | 160 | 37 |       | 95    | 2.1       | 2.1                    | NU 315 E  | NJ | NUP | N |    |         | 240000 | 263000  | 3400                       | 4000                       | 87                     | 93                     | 97                     | 106                    | 148                    |                        |                        | 2                       | 2   | 3.70         |       | HJ 2315   | 75                     | 104.2          | 11             | 21.5                   | 2.1           | 0.437                  |                        |
|           | 160 | 55 |       | 95.5  | 2.1       | 2.1                    | NU 2315   | NJ | NUP | N |    |         | 258000 | 300000  | 3400                       | 4000                       | 87                     | 93                     | 97                     | 106                    | 148                    |                        |                        | 2                       | 2   | 4.84         |       | HJ 2315 E | 75                     | 104.2          | 11             | 19.5                   | 2.1           | 0.421                  |                        |
|           | 160 | 55 |       | 95    | 2.1       | 2.1                    | NU 2315 E | NJ | NUP | N |    |         | 330000 | 395000  | 3400                       | 4000                       | 87                     | 93                     | 97                     | 106                    | 148                    |                        |                        | 2                       | 2   | 5.30         |       | HJ 415    | 75                     | 116            | 13             | 21.5                   | 3             | 0.710                  |                        |
|           | 190 | 45 | 160.5 | 104.5 | 3         | 3                      | NU 415    | NJ | NUP | N | NF | NP      | 262000 | 274000  | 3400                       | 4000                       | 89                     | 89                     | 103                    | 107                    | 118                    | 176                    | 176                    | 162                     | 2.5 | 2.5          | 6.40  | 6.25      |                        |                |                |                        |               |                        |                        |
| 80        | 125 | 22 | 113.5 | 91.5  | 1.1       | 1                      | NU 1016   |    |     | N |    |         | 69000  | 86500   | 5300                       | 6300                       | 86.5                   | 86                     | 90                     | 94                     | 118                    | 120                    | 113.5                  | 1                       | 1   | 1.03         | 0.994 | HJ 216    | 80                     | 101.2          | 8              | 13.5                   | 2             | 0.214                  |                        |
|           | 140 | 26 | 125.3 | 95.3  | 2         | 2                      | NU 216    | NJ | NUP | N | NF | NP      | 106000 | 122000  | 4500                       | 5300                       | 90                     | 90                     | 94                     | 97                     | 104                    | 130                    | 130                    | 2                       | 2   | 1.53         | 1.50  | HJ 216 E  | 80                     | 101.6          | 8              | 12.5                   | 2             | 0.213                  |                        |
|           | 140 | 26 |       | 95.3  | 2         | 2                      | NU 216 E  | NJ | NUP | N |    |         | 139000 | 167000  | 4000                       | 4800                       | 90                     | 94                     | 97                     | 104                    | 130                    |                        |                        | 2                       | 2   | 1.86         |       | HJ 2216   | 80                     | 101.2          | 8              | 13.5                   | 2             | 0.214                  |                        |
|           | 140 | 33 |       | 95.3  | 2         | 2                      | NU 2216   | NJ | NUP | N |    |         | 147000 | 186000  | 4000                       | 4800                       | 90                     | 94                     | 97                     | 104                    | 130                    |                        |                        | 2                       | 2   | 1.96         |       | HJ 2216 E | 80                     | 101.6          | 8              | 12.5                   | 2             | 0.213                  |                        |
|           | 140 | 33 |       | 95.3  | 2         | 2                      | NU 2216 E | NJ | NUP | N |    |         | 186000 | 243000  | 4000                       | 4800                       | 90                     | 94                     | 97                     | 104                    | 130                    |                        |                        | 2                       | 2   | 2.15         |       | HJ 316    | 80                     | 111.8          | 11             | 19.5                   | 2.1           | 0.479                  |                        |
|           | 170 | 39 | 147   | 103   | 2.1       | 2.1                    | NU 316    | NJ | NUP | N | NF | NP      | 190000 | 207000  | 3600                       | 4300                       | 92                     | 92                     | 99                     | 105                    | 114                    | 158                    | 158                    | 2                       | 2   | 3.93         | 3.83  | HJ 316 E  | 80                     | 110.6          | 11             | 17                     | 2.1           | 0.440                  |                        |
|           | 170 | 39 |       | 101   | 2.1       | 2.1                    | NU 316 E  | NJ | NUP | N |    |         | 256000 | 282000  | 3200                       | 3800                       | 92                     | 99                     | 105                    | 114                    | 158                    |                        |                        | 2                       | 2   | 4.38         |       | HJ 2316   | 80                     | 111.8          | 11             | 23                     | 2.1           | 0.517                  |                        |
|           | 170 | 58 |       | 103   | 2.1       | 2.1                    | NU 2316   | NJ | NUP | N |    |         | 274000 | 330000  | 3200                       | 3800                       | 92                     | 99                     | 105                    | 114                    | 158                    |                        |                        | 2                       | 2   | 5.83         |       | HJ 2316 E | 80                     | 110.6          | 11             | 20                     | 2.1           | 0.475                  |                        |
|           | 170 | 58 |       | 101   | 2.1       | 2.1                    | NU 2316 E | NJ | NUP | N |    |         | 355000 | 430000  | 3200                       | 3800                       | 92                     | 99                     | 105                    | 114                    | 158                    |                        |                        | 2                       | 2   | 6.35         |       | HJ 416    | 80                     | 122            | 13             | 22                     | 3             | 0.779                  |                        |
|           | 200 | 48 | 170   | 110   | 3         | 3                      | NU 416    | NJ | NUP | N | NF | NP      | 299000 | 315000  | 3200                       | 3800                       | 94                     | 94                     | 109                    | 112                    | 124                    | 186                    | 186                    | 172                     | 2.5 | 2.5          | 7.45  | 7.28      |                        |                |                |                        |               |                        |                        |
| 85        | 130 | 22 | 118.5 | 96.5  | 1.1       | 1                      | NU 1017   |    |     | N |    |         | 71500  | 91000   | 5000                       | 6000                       | 91.5                   | 91                     | 95                     | 99                     | 123                    | 125                    | 118.5                  | 1                       | 1   | 1.06         | 1.04  | HJ 217    | 85                     | 108.2          | 8              | 14                     | 2             | 0.253                  |                        |
|           | 150 | 28 | 133.8 | 101.8 | 2         | 2                      | NU 217    | NJ | NUP | N | NF | NP      | 120000 | 140000  | 4300                       | 5000                       | 95                     | 95                     | 99                     | 104                    | 110                    | 140                    | 140                    | 2                       | 2   | 1.92         | 1.87  | HJ 217 E  | 85                     | 107.6          | 8              | 12.5                   | 2             | 0.239                  |                        |
|           | 150 | 28 |       | 100.5 | 2         | 2                      | NU 217 E  | NJ | NUP | N |    |         | 167000 | 199000  | 3800                       | 4500                       | 95                     | 99                     | 104                    | 110                    | 140                    |                        |                        | 2                       | 2   | 2.10         |       | HJ 2217   | 85                     | 108.2          | 8              | 14                     | 2             | 0.253                  |                        |
|           | 150 | 36 |       | 101.8 | 2         | 2                      | NU 2217   | NJ | NUP | N |    |         | 169000 | 218000  | 3800                       | 4500                       | 95                     | 99                     | 104                    | 110                    | 140                    |                        |                        | 2                       | 2   | 2.50         |       | HJ 2217 E | 85                     | 107.6          | 8              | 13                     | 2             | 0.243                  |                        |
|           | 150 | 36 |       | 100.5 | 2         | 2                      | NU 2217 E | NJ | NUP | N |    |         | 217000 | 279000  | 3800                       | 4500                       | 95                     | 99                     | 104                    | 110                    | 140                    |                        |                        | 2                       | 2   | 2.75         |       | HJ 317    | 85                     | 117.5          | 12             | 20.5                   | 3             | 0.560                  |                        |
|           | 180 | 41 | 156   | 108   | 3         | 3                      | NU 317    | NJ | NUP | N | NF | NP      | 224000 | 247000  | 3400                       | 4000                       | 99                     | 99                     | 106                    | 110                    | 119                    | 166                    | 166                    | 2.5                     | 2.5 | 4.54         | 4.44  | HJ 317 E  | 85                     | 117.9          | 12             | 18.5                   | 3             | 0.545                  |                        |
|           | 180 | 41 |       | 108   | 3         | 3                      | NU 317 E  | NJ | NUP | N |    |         | 291000 | 330000  | 3000                       | 3600                       | 99                     | 106                    | 110                    | 119                    | 166                    |                        |                        | 2.5                     | 2.5 | 5.12         |       | HJ 2317   | 85                     | 117.5          | 12             | 24                     | 3             | 0.603                  |                        |
|           | 180 | 60 |       | 108   | 3         | 3                      | NU 2317   | NJ | NUP | N |    |         | 315000 | 380000  | 3000                       | 3600                       | 99                     | 106                    | 110                    | 119                    | 166                    |                        |                        | 2.5                     | 2.5 | 6.62         |       | HJ 2317 E | 85                     | 117.9          | 12             | 22                     | 3             | 0.590                  |                        |
|           | 180 | 60 |       | 108   | 3         | 3                      | NU 2317 E | NJ | NUP | N |    |         | 390000 | 485000  | 3000                       | 3600                       | 99                     | 106                    | 110                    | 119                    | 166                    |                        |                        | 2.5                     | 2.5 | 7.35         |       | HJ 417    | 85                     | 126            | 14             | 24                     | 4             | 0.876                  |                        |
|           | 210 | 52 | 177   | 113   | 4         | 4                      | NU 417    | NJ | NUP | N | NF | NP      | 330000 | 350000  | 3000                       | 3600                       | 103                    | 103                    | 111                    | 115                    | 128                    | 192                    | 192                    | 179                     | 3   | 3            | 9.10  | 8.68      |                        |                |                |                        |               |                        |                        |
| 90        | 140 | 24 | 127   | 103   | 1.5       | 1.1                    | NU 1018   |    |     | N |    |         | 81500  | 10400   |                            |                            |                        |                        |                        |                        |                        |                        |                        |                         |     |              |       |           |                        |                |                |                        |               |                        |                        |

円筒ころ軸受

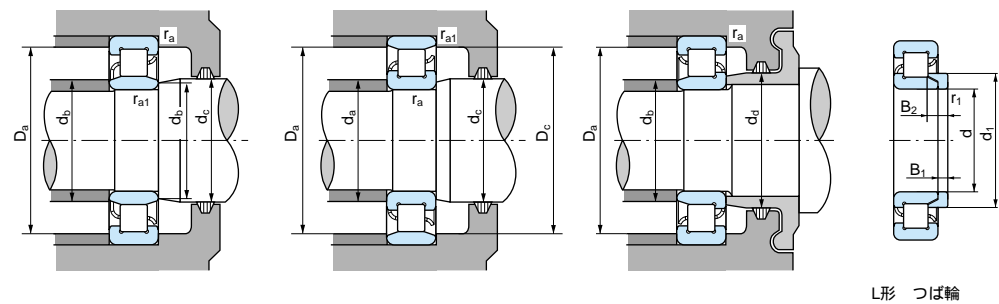
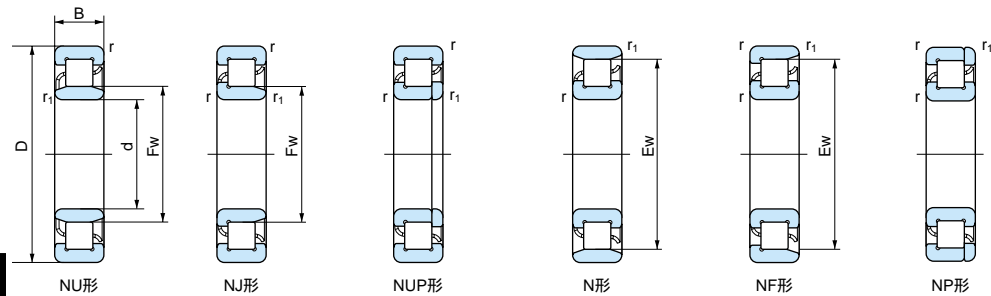
内径：95 - 120mm



L形 つば輪

1N = 0.102kgf

| 主要寸法 (mm) |     |     |       |       |      |                | 呼び番号      |     |     |    |    | 基本動格重  | 基本静格重  | 許容回転数 (rpm) <sup>(1)</sup> |      | 取付関係寸法 (mm) |                |                |                |                |                |                | 質量 (kg)        |                 | L形つば輪寸法 (mm) |      |      |           |                |                |                |                |         |       |       |  |  |  |  |
|-----------|-----|-----|-------|-------|------|----------------|-----------|-----|-----|----|----|--------|--------|----------------------------|------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|--------------|------|------|-----------|----------------|----------------|----------------|----------------|---------|-------|-------|--|--|--|--|
| d         | D   | B   | Ew    | Fw    | r    | r <sub>1</sub> | NU        | NJ  | NUP | N  | NF | NP     | Cr(N)  | Cor(N)                     | グリース | 油潤滑         | d <sub>a</sub> | d <sub>b</sub> | d <sub>c</sub> | d <sub>d</sub> | D <sub>a</sub> | D <sub>b</sub> | r <sub>a</sub> | r <sub>a1</sub> | NU           | N    | 呼び番号 | d         | d <sub>1</sub> | B <sub>1</sub> | B <sub>2</sub> | r <sub>1</sub> | 質量 (kg) |       |       |  |  |  |  |
|           |     |     |       |       | (最小) | (最小)           |           |     |     |    |    |        |        |                            |      |             | (最小)           | (最小)           | (最大)           | (最小)           | (最大)           | (最大)           | (最小)           | (最大)            | (最大)         |      |      |           | (最大)           | (最大)           | (最小)           | (最小)           | (参考)    |       |       |  |  |  |  |
| 95        | 145 | 24  | 132   | 108   | 1.5  | 1.1            | NU 1019   |     |     | N  |    |        | 84000  | 110000                     | 4500 | 5000        | 103            | 102            | 106            | 111            | 136.5          | 138.5          | 132.5          | 1.5             | 1            | 1.42 | 1.40 | HJ 219    | 95             | 121            | 9              | 15.5           | 2.1     | 0.357 |       |  |  |  |  |
|           | 170 | 32  | 151.5 | 113.5 | 2.1  | 2.1            | NU 219    | NJ  | NUP | N  | NF | NP     | 165000 | 195000                     | 3600 | 4300        | 107            | 107            | 111            | 116            | 123            | 158            | 158            | 155             | 2            | 2    | 2.81 | 2.75      | HJ 219 E       | 95             | 120.6          | 9              | 14      | 2.1   | 0.340 |  |  |  |  |
|           | 170 | 32  |       | 112.5 | 2.1  | 2.1            | NU 219 E  |     |     |    |    |        | 222000 | 259000                     | 3200 | 4000        | 107            | 107            | 111            | 116            | 123            | 158            |                |                 | 2            | 2    | 3.08 |           | HJ 2219        | 95             | 121            | 9              | 16.5    | 2.1   | 0.367 |  |  |  |  |
|           | 170 | 43  |       | 113.5 | 2.1  | 2.1            | NU 2219   | NJ  | NUP |    |    |        | 230000 | 298000                     | 3400 | 4000        | 107            | 107            | 111            | 116            | 123            | 158            |                |                 | 2            | 2    | 3.85 |           | HJ 2219 E      | 95             | 120.6          | 9              | 15.5    | 2.1   | 0.357 |  |  |  |  |
|           | 170 | 43  |       | 112.5 | 2.1  | 2.1            | NU 2219 E |     |     |    |    |        | 286000 | 370000                     | 3200 | 4000        | 107            | 107            | 111            | 116            | 123            | 158            |                |                 | 2            | 2    | 4.23 |           | HJ 319         | 95             | 132            | 13             | 22.5    | 3     | 0.774 |  |  |  |  |
|           | 200 | 45  | 173.5 | 121.5 | 3    | 3              | NU 319    | NJ  | NUP | N  | NF | NP     | 258000 | 289000                     | 3000 | 3600        | 109            | 109            | 119            | 124            | 134            | 186            | 186            | 178             | 2.5          | 2.5  | 6.23 | 6.13      | HJ 319 E       | 95             | 132.2          | 13             | 20.5    | 3     | 0.750 |  |  |  |  |
|           | 200 | 45  |       | 121.5 | 3    | 3              | NU 319 E  |     |     |    |    |        | 335000 | 385000                     | 2400 | 3000        | 109            | 109            | 119            | 124            | 134            | 186            |                |                 | 2.5          | 2.5  | 6.92 |           | HJ 2319        | 95             | 132            | 13             | 26.5    | 3     | 0.836 |  |  |  |  |
|           | 200 | 67  |       | 121.5 | 3    | 3              | NU 2319   | NJ  | NUP |    |    |        | 370000 | 460000                     | 2600 | 3200        | 109            | 109            | 119            | 124            | 134            | 186            |                |                 | 2.5          | 2.5  | 9.39 |           | HJ 2319 E      | 95             | 132.2          | 13             | 20.5    | 3     | 0.750 |  |  |  |  |
|           | 200 | 67  |       | 121.5 | 3    | 3              | NU 2319 E |     |     |    |    |        | 460000 | 585000                     | 2400 | 3000        | 109            | 109            | 119            | 124            | 134            | 186            |                |                 | 2.5          | 2.5  | 10.3 |           | HJ 419         | 95             | 147            | 15             | 25.5    | 4     | 1.32  |  |  |  |  |
|           | 240 | 55  | 201.5 | 133.5 | 4    | 4              | NU 419    | NJ  | NUP | N  | NF | NP     | 400000 | 445000                     | 2600 | 3200        | 113            | 113            | 132            | 136            | 149            | 222            | 222            | 204             | 3            | 3    | 14.0 | 13.6      |                |                |                |                |         |       |       |  |  |  |  |
| 100       | 150 | 24  | 137   | 113   | 1.5  | 1.1            | NU 1020   |     |     | N  |    |        | 87000  | 116000                     | 4300 | 5000        | 108            | 107            | 111            | 116            | 141.5          | 143.5          | 137.5          | 1.5             | 1            | 1.48 | 1.46 | HJ 220    | 100            | 128            | 10             | 17             | 2.1     | 0.448 |       |  |  |  |  |
|           | 180 | 34  | 160   | 120   | 2.1  | 2.1            | NU 220    | NJ  | NUP | N  | NF | NP     | 183000 | 217000                     | 3400 | 4000        | 112            | 112            | 117            | 122            | 130            | 168            | 168            | 164             | 2            | 2    | 3.30 | 3.23      | HJ 220 E       | 100            | 127.5          | 10             | 15      | 2.1   | 0.421 |  |  |  |  |
|           | 180 | 34  |       | 119   | 2.1  | 2.1            | NU 220 E  |     |     |    |    |        | 250000 | 305000                     | 3200 | 3800        | 112            | 112            | 117            | 122            | 130            | 168            |                |                 | 2            | 2    | 3.73 |           | HJ 2220        | 100            | 128            | 10             | 18      | 2.1   | 0.459 |  |  |  |  |
|           | 180 | 46  |       | 120   | 2.1  | 2.1            | NU 2220   | NJ  | NUP |    |    |        | 257000 | 335000                     | 3200 | 3800        | 112            | 112            | 117            | 122            | 130            | 168            |                |                 | 2            | 2    | 4.67 |           | HJ 2220 E      | 100            | 127.5          | 10             | 16      | 2.1   | 0.433 |  |  |  |  |
|           | 180 | 46  |       | 119   | 2.1  | 2.1            | NU 2220 E |     |     |    |    |        | 335000 | 445000                     | 3200 | 3800        | 112            | 112            | 117            | 122            | 130            | 168            |                |                 | 2            | 2    | 5.13 |           | HJ 320         | 100            | 140.5          | 13             | 22.5    | 3     | 0.892 |  |  |  |  |
|           | 215 | 47  | 185.5 | 129.5 | 3    | 3              | NU 320    | NJ  | NUP | N  | NF | NP     | 300000 | 335000                     | 2800 | 3400        | 114            | 114            | 125            | 132            | 143            | 201            | 201            | 190             | 2.5          | 2.5  | 7.70 | 7.53      | HJ 320 E       | 100            | 139.6          | 13             | 20.5    | 3     | 0.850 |  |  |  |  |
|           | 215 | 47  |       | 127.5 | 3    | 3              | NU 320 E  |     |     |    |    |        | 380000 | 425000                     | 2200 | 2800        | 114            | 114            | 125            | 132            | 143            | 201            |                |                 | 2.5          | 2.5  | 8.45 |           | HJ 2320        | 100            | 140.5          | 13             | 27.5    | 3     | 0.977 |  |  |  |  |
|           | 215 | 73  |       | 129.5 | 3    | 3              | NU 2320   | NJ  | NUP |    |    |        | 435000 | 545000                     | 2400 | 3000        | 114            | 114            | 125            | 132            | 143            | 201            |                |                 | 2.5          | 2.5  | 11.9 |           | HJ 2320 E      | 100            | 139.6          | 13             | 23.5    | 3     | 0.906 |  |  |  |  |
|           | 215 | 73  |       | 127.5 | 3    | 3              | NU 2320 E |     |     |    |    |        | 570000 | 715000                     | 2200 | 2800        | 114            | 114            | 125            | 132            | 143            | 201            |                |                 | 2.5          | 2.5  | 12.9 |           | HJ 420         | 100            | 153.5          | 16             | 27      | 4     | 1.52  |  |  |  |  |
|           | 250 | 58  | 211   | 139   | 4    | 4              | NU 420    | NJ  | NUP | N  | NF | NP     | 445000 | 500000                     | 2400 | 3000        | 118            | 118            | 137            | 141            | 156            | 232            | 232            | 213             | 3            | 3    | 14.4 | 14.0      |                |                |                |                |         |       |       |  |  |  |  |
| 105       | 160 | 26  | 145.5 | 119.5 | 2    | 1.1            | NU 1021   |     |     | N  |    |        | 101000 | 136000                     | 4000 | 4800        | 114            | 112            | 118            | 122            | 150            | 153.5          | 146.5          | 2               | 1            | 1.88 | 1.85 | HJ 221    | 105            | 135            | 10             | 17.5           | 2.1     | 0.507 |       |  |  |  |  |
|           | 190 | 36  | 168.8 | 126.8 | 2.1  | 2.1            | NU 221    | NJ  | NUP | N  | NF | NP     | 202000 | 241000                     | 3200 | 3800        | 117            | 117            | 124            | 129            | 137            | 178            | 178            | 173             | 2            | 2    | 4.03 | 3.95      | HJ 321         | 105            | 147            | 13             | 22.5    | 3     | 0.977 |  |  |  |  |
|           | 225 | 49  | 195   | 135   | 3    | 3              | NU 321    | NJ  | NUP | N  | NF | NP     | 340000 | 385000                     | 2600 | 3200        | 119            | 119            | 132            | 137            | 149            | 211            | 211            | 199             | 2.5          | 2.5  | 8.73 | 8.51      | HJ 421         | 105            | 135            | 10             | 17.5    | 2.1   | 0.507 |  |  |  |  |
|           | 260 | 60  | 220.5 | 144.5 | 4    | 4              | NU 421    | NJ  | NUP | N  | NF | NP     | 495000 | 555000                     | 2200 | 2800        | 123            | 123            | 143            | 147            | 162            | 242            | 242            | 223             | 3            | 3    | 19.5 | 19.1      |                |                |                |                |         |       |       |  |  |  |  |
|           | 170 | 28  | 155   | 125   | 2    | 1.1            | NU 1022   |     |     | N  |    |        | 127000 | 166000                     | 3800 | 4500        | 119            | 117            | 124            | 128            | 148            | 160            | 163.5          | 156             | 2            | 1    | 2.34 | 2.31      | HJ 222         | 110            | 141.5          | 11             | 17      | 2.1   | 0.593 |  |  |  |  |
|           | 200 | 38  | 178.5 | 132.5 | 2.1  | 2.1            | NU 222    | NJ  | NUP | N  | NF | NP     | 240000 | 290000                     | 3000 | 3600        | 122            | 122            | 130            | 135            | 144            | 188            | 188            | 182             | 2            | 2    | 4.64 | 4.58      | HJ 222 E       | 110            | 141.7          | 11             | 20.5    | 2.1   | 0.600 |  |  |  |  |
| 200       | 38  |     | 132.5 | 2.1   | 2.1  | NU 222 E       |           |     |     |    |    | 293000 | 365000 | 2600                       | 3200 | 122         | 122            | 130            | 135            | 144            | 188            |                |                | 2               | 2            | 5.17 |      | HJ 2222   | 110            | 141.7          | 11             | 19.5           | 2.1     | 0.629 |       |  |  |  |  |
| 200       | 53  |     | 132.5 | 2.1   | 2.1  | NU 2222        | NJ        | NUP |     |    |    | 320000 | 440000 | 2800                       | 3400 | 122         | 122            | 130            | 135            | 144            | 188            |                |                | 2               | 2            | 6.93 |      | HJ 2222 E | 110            | 141.7          | 11             | 19.5           | 2.1     | 0.629 |       |  |  |  |  |
| 200       | 53  |     | 132.5 | 2.1   | 2.1  | NU 2222 E      |           |     |     |    |    | 385000 | 515000 | 2600                       | 3200 | 122         | 122            | 130            | 135            | 144            | 188            |                |                | 2               | 2            | 7.32 |      | HJ 322    | 110            | 155.5          | 14             | 23             | 3       | 1.17  |       |  |  |  |  |
| 240       | 50  | 207 | 143   | 3     | 3    | NU 322         | NJ        | NUP | N   | NF | NP | 380000 | 435000 | 2400                       | 3000 | 124         | 124            | 140            | 145            | 158            | 226            | 226            | 211            | 2.5             | 2.5          | 10.4 | 10.2 | HJ 322 E  | 110            | 155.8          | 14             | 22             | 3       | 1.16  |       |  |  |  |  |
| 240       | 50  |     | 143   | 3     | 3    | NU 322 E       |           |     |     |    |    | 450000 | 525000 | 2200                       | 2800 | 124         | 124            | 140            | 145            | 158            | 226            |                |                | 2.5             | 2.5          | 11.1 |      | HJ 2322   | 110            | 155.8          | 14             | 28             | 3       | 1.27  |       |  |  |  |  |
| 240       | 80  |     | 143   | 3     | 3    | NU 2322        | NJ        | NUP |     |    |    | 570000 | 730000 | 2000                       | 2600 | 124         | 124            | 140            | 145            | 158            | 226            |                |                | 2.5             | 2.5          | 18.8 |      | HJ 2322 E | 110            | 155.8          | 14             | 26.5           | 3       | 1.26  |       |  |  |  |  |
| 240       | 80  |     | 143   | 3     | 3    | NU 2322 E      |           |     |     |    |    | 670000 | 880000 | 2000                       | 2600 | 124         | 124            | 140            | 145            | 158            | 226            |                |                | 2.5             | 2.5          | 18.5 |      | HJ 422    | 110            | 171            | 17             | 29.5           | 4       | 2.05  |       |  |  |  |  |
| 280       | 65  | 235 | 155   | 4     | 4    | NU 422         | NJ        | NUP | N   | NF | NP | 545000 | 620000 | 2000                       | 2600 | 128         | 128            | 153            | 157            | 173            | 262            | 262            | 237            | 3               | 3            | 20.5 | 19.9 |           |                |                |                |                |         |       |       |  |  |  |  |
| 120       | 180 | 28  | 165   | 135   | 2    | 1.1            | NU 1024   |     |     | N  |    |        | 131000 | 175000                     | 3400 | 4000        | 129            | 127            | 134            | 138            | 170            | 173.5          | 166            | 2               | 1            | 2.51 | 2.47 | HJ 224    | 120            | 153            | 11             | 19             | 2.1     | 0.700 |       |  |  |  |  |
|           | 215 | 40  | 191.5 | 143.5 | 2.1  | 2.1            | NU 224    | NJ  | NUP | N  | NF | NP     | 260000 | 320000                     | 2800 | 3400        | 132            | 132            | 141            | 146            | 156            | 203            | 203            | 196             | 2            | 2    | 5.61 | 5.50      | HJ 224 E       | 120            | 153.4          | 11             | 17      | 2.1   | 0.680 |  |  |  |  |
|           | 215 | 40  |       | 143.5 | 2.1  | 2.1            | NU 224 E  |     |     |    |    |        | 335000 | 420000                     | 2400 | 3000        | 132            | 132            | 141            | 146            | 156            | 203            |                |                 | 2            | 2    | 6.25 |           | HJ 2           |                |                |                |         |       |       |  |  |  |  |

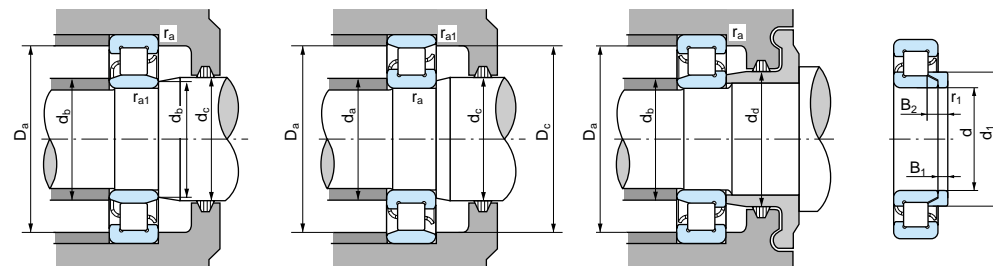
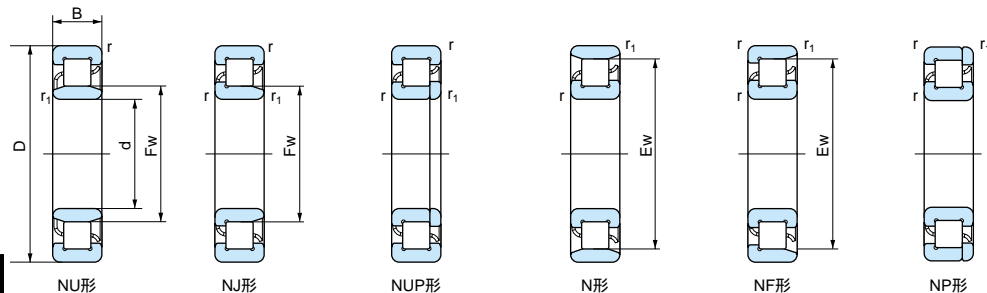


1N = 0.102kgf

| 主要寸法 (mm) |     |     |     |       |       | 呼び番号   |           |         |     |    |    | 基本動定格荷重 |         |         |        | 基本静定格荷重 |                |                |                | 許容回転数 (rpm) <sup>(1)</sup> |                |                |                | 取付関係寸法 (mm)     |      |      |      |        |                |                |                | 質量 (kg)        |         |      |       | L形つば軸寸法 (mm) |  |  |  |  |  |
|-----------|-----|-----|-----|-------|-------|--------|-----------|---------|-----|----|----|---------|---------|---------|--------|---------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|-----------------|------|------|------|--------|----------------|----------------|----------------|----------------|---------|------|-------|--------------|--|--|--|--|--|
| d         | D   | B   | Ew  | Fw    | r     | r1     | NU        | NJ      | NUP | N  | NF | NP      | Cr(N)   | Cor(N)  | グリス潤滑  | 油潤滑     | d <sub>a</sub> | d <sub>b</sub> | d <sub>c</sub> | d <sub>d</sub>             | D <sub>a</sub> | D <sub>b</sub> | r <sub>a</sub> | r <sub>a1</sub> | NU   | N    | 呼び番号 | d      | d <sub>1</sub> | B <sub>1</sub> | B <sub>2</sub> | r <sub>1</sub> | 質量 (kg) |      |       |              |  |  |  |  |  |
|           |     |     |     |       | (最小)  | (最小)   |           |         |     |    |    |         |         |         |        |         | (最小)           | (最小)           | (最大)           | (最小)                       | (最大)           | (最小)           | (最大)           | (最小)            | (最大) |      |      |        | (最大)           |                |                |                | (最小)    | 参考   |       |              |  |  |  |  |  |
| 130       | 200 | 33  | 182 | 148   | 2     | 1.1    | NU 1026   |         |     | N  |    |         | 160000  | 217000  | 3200   | 3800    | 139            | 137            | 146            | 151                        | 168            | 190            | 193.5          | 183             | 2    | 1    | 3.83 | 3.77   |                |                |                |                |         |      |       |              |  |  |  |  |  |
|           | 230 | 40  | 204 | 156   | 3     | 3      | NU 226    | NJ      | NUP | N  | NF | NP      | 270000  | 340000  | 2600   | 3200    | 144            | 144            | 151            | 158                        | 168            | 216            | 216            | 208             | 2.5  | 2.5  | 7.60 | 7.39   | HJ 226         | 130            | 165.5          | 11             | 19      | 3    | 0.805 |              |  |  |  |  |  |
|           | 230 | 40  |     | 153.5 | 3     | 3      | NU 226 E  |         |     |    |    |         | 365000  | 455000  | 2200   | 2800    | 144            | 151            | 158            | 168                        | 216            |                |                |                 | 2.5  | 2.5  | 7.50 |        | HJ 226 E       | 130            | 164.2          | 11             | 17      | 3    | 0.775 |              |  |  |  |  |  |
|           | 230 | 64  |     | 156   | 3     | 3      | NU 2226   | NJ      | NUP |    |    |         | 380000  | 530000  | 2200   | 2800    | 144            | 151            | 158            | 168                        | 216            |                |                |                 | 2.5  | 2.5  | 11.2 |        | HJ 2226        | 130            | 165.5          | 11             | 25      | 3    | 0.911 |              |  |  |  |  |  |
|           | 230 | 64  |     | 153.5 | 3     | 3      | NU 2226 E |         |     |    |    |         | 530000  | 735000  | 2200   | 2800    | 144            | 151            | 158            | 168                        | 216            |                |                |                 | 2.5  | 2.5  | 12.5 |        | HJ 2226 E      | 130            | 164.2          | 11             | 21      | 3    | 0.833 |              |  |  |  |  |  |
|           | 280 | 58  | 243 | 167   | 4     | 4      | NU 326    | NJ      | NUP | N  | NF | NP      | 555000  | 665000  | 2000   | 2600    | 148            | 148            | 164            | 169                        | 184            | 262            | 262            | 247             | 3    | 3    | 18.2 | 17.8   | HJ 326         | 130            | 182            | 14             | 24      | 4    | 1.61  |              |  |  |  |  |  |
|           | 280 | 58  |     | 167   | 4     | 4      | NU 326 E  |         |     |    |    |         | 615000  | 735000  | 1800   | 2200    | 148            | 164            | 169            | 184                        | 262            |                |                |                 | 3    | 3    | 18.5 |        | HJ 326 E       | 130            | 182.3          | 14             | 23      | 4    | 1.59  |              |  |  |  |  |  |
|           | 280 | 93  |     | 167   | 4     | 4      | NU 2326   | NJ      | NUP |    |    |         | 790000  | 1040000 | 1800   | 2200    | 148            | 164            | 169            | 184                        | 262            |                |                |                 | 3    | 3    | 29.1 |        | HJ 2326        | 130            | 182            | 14             | 29.5    | 4    | 1.78  |              |  |  |  |  |  |
|           | 280 | 93  |     | 167   | 4     | 4      | NU 2326 E |         |     |    |    |         | 920000  | 1230000 | 1800   | 2200    | 148            | 164            | 169            | 184                        | 262            |                |                |                 | 3    | 3    | 28.5 |        | HJ 2326 E      | 130            | 182.3          | 14             | 28      | 4    | 1.75  |              |  |  |  |  |  |
| 340       | 78  | 285 | 185 | 5     | 5     | NU 426 | NJ        | NUP     | N   | NF | NP | 820000  | 955000  | 1700    | 2200   | 152     | 152            | 183            | 187            | 208                        | 318            | 318            | 287            | 4               | 4    | 36.9 | 36.1 | HJ 426 | 130            | 205            | 18             | 32             | 5       | 3.23 |       |              |  |  |  |  |  |
| 140       | 210 | 33  | 192 | 158   | 2     | 1.1    | NU 1028   |         |     | N  |    |         | 170000  | 239000  | 3000   | 3600    | 149            | 147            | 156            | 161                        | 182            | 200            | 203.5          | 193             | 2    | 1    | 4.07 | 4.00   |                |                |                |                |         |      |       |              |  |  |  |  |  |
|           | 250 | 42  | 221 | 169   | 3     | 3      | NU 228    | NJ      | NUP | N  | NF | NP      | 310000  | 420000  | 2400   | 3000    | 154            | 154            | 166            | 171                        | 182            | 236            | 236            | 228             | 2.5  | 2.5  | 9.49 | 9.26   | HJ 228         | 140            | 179.5          | 11             | 19      | 3    | 0.968 |              |  |  |  |  |  |
|           | 250 | 42  |     | 169   | 3     | 3      | NU 228 E  |         |     |    |    |         | 390000  | 515000  | 2000   | 2600    | 154            | 166            | 171            | 182                        | 236            |                |                |                 | 2.5  | 2.5  | 8.90 |        | HJ 228 E       | 140            | 180            | 11             | 18      | 3    | 0.966 |              |  |  |  |  |  |
|           | 250 | 68  |     | 169   | 3     | 3      | NU 2228   | NJ      | NUP |    |    |         | 465000  | 670000  | 2000   | 2600    | 154            | 166            | 171            | 182                        | 236            |                |                |                 | 2.5  | 2.5  | 14.3 |        | HJ 2228        | 140            | 179.5          | 11             | 25      | 3    | 1.09  |              |  |  |  |  |  |
|           | 250 | 68  |     | 169   | 3     | 3      | NU 2228 E |         |     |    |    |         | 570000  | 835000  | 2000   | 2600    | 154            | 166            | 171            | 182                        | 236            |                |                |                 | 2.5  | 2.5  | 14.9 |        | HJ 2228 E      | 140            | 180            | 11             | 23      | 3    | 1.08  |              |  |  |  |  |  |
|           | 300 | 62  | 260 | 180   | 4     | 4      | NU 328    | NJ      | NUP | N  | NF | NP      | 595000  | 745000  | 1900   | 2400    | 158            | 158            | 176            | 182                        | 198            | 282            | 282            | 268             | 3    | 3    | 22.4 | 21.8   | HJ 328         | 140            | 196            | 15             | 26      | 4    | 2.01  |              |  |  |  |  |  |
|           | 300 | 62  |     | 180   | 4     | 4      | NU 328 E  |         |     |    |    |         | 660000  | 795000  | 1800   | 2200    | 158            | 176            | 182            | 198                        | 282            |                |                |                 | 3    | 3    | 21.8 |        | HJ 328 E       | 140            | 196            | 15             | 25      | 4    | 1.97  |              |  |  |  |  |  |
|           | 300 | 102 |     | 180   | 4     | 4      | NU 2328   | NJ      | NUP |    |    |         | 920000  | 1250000 | 1800   | 2200    | 158            | 176            | 182            | 198                        | 282            |                |                |                 | 3    | 3    | 36.8 |        | HJ 2328        | 140            | 196            | 15             | 33.5    | 4    | 2.27  |              |  |  |  |  |  |
|           | 300 | 102 |     | 180   | 4     | 4      | NU 2328 E |         |     |    |    |         | 1020000 | 1380000 | 1800   | 2200    | 158            | 176            | 182            | 198                        | 282            |                |                |                 | 3    | 3    | 35.9 |        | HJ 2328 E      | 140            | 196            | 15             | 31      | 4    | 2.18  |              |  |  |  |  |  |
|           | 360 | 82  | 302 | 198   | 5     | 5      | NU 428    | NJ      | NUP | N  | NF | NP      | 875000  | 1020000 | 1500   | 1900    | 162            | 162            | 195            | 200                        | 222            | 338            | 338            | 304             | 4    | 4    | 48.0 | 46.8   | HJ 428         | 140            | 219            | 18             | 33      | 5    | 3.70  |              |  |  |  |  |  |
|           | 150 | 225 | 35  | 205.5 | 169.5 | 2.1    | 1.5       | NU 1030 |     |    | N  |         |         | 189000  | 270000 | 2600    | 3200           | 161            | 158.5          | 167                        | 173            | 193            | 213            | 217             | 207  | 2    | 1.5  | 4.90   | 4.83           |                |                |                |         |      |       |              |  |  |  |  |  |
| 270       |     | 45  | 238 | 182   | 3     | 3      | NU 230    | NJ      | NUP | N  | NF | NP      | 375000  | 490000  | 2000   | 2600    | 164            | 164            | 179            | 184                        | 196            | 256            | 256            | 245             | 2.5  | 2.5  | 11.9 | 11.7   | HJ 230         | 150            | 193            | 12             | 20.5    | 3    | 1.22  |              |  |  |  |  |  |
| 270       |     | 45  |     | 182   | 3     | 3      | NU 230 E  |         |     |    |    |         | 445000  | 585000  | 1900   | 2400    | 164            | 179            | 184            | 196                        | 256            |                |                |                 | 2.5  | 2.5  | 11.5 |        | HJ 230 E       | 150            | 193.7          | 12             | 19.5    | 3    | 1.23  |              |  |  |  |  |  |
| 270       |     | 73  |     | 182   | 3     | 3      | NU 2230   | NJ      | NUP |    |    |         | 545000  | 800000  | 1900   | 2400    | 164            | 179            | 184            | 196                        | 256            |                |                |                 | 2.5  | 2.5  | 18.7 |        | HJ 2230        | 150            | 193            | 12             | 26.5    | 3    | 1.36  |              |  |  |  |  |  |
| 270       |     | 73  |     | 182   | 3     | 3      | NU 2230 E |         |     |    |    |         | 660000  | 990000  | 1900   | 2400    | 164            | 179            | 184            | 196                        | 256            |                |                |                 | 2.5  | 2.5  | 18.5 |        | HJ 2230 E      | 150            | 193.7          | 12             | 24.5    | 3    | 1.35  |              |  |  |  |  |  |
| 320       |     | 65  | 277 | 193   | 4     | 4      | NU 330    | NJ      | NUP | N  | NF | NP      | 660000  | 805000  | 1700   | 2000    | 168            | 168            | 190            | 195                        | 213            | 302            | 302            | 287             | 3    | 3    | 26.5 | 25.9   | HJ 330         | 150            | 210            | 15             | 26.5    | 4    | 2.32  |              |  |  |  |  |  |
| 320       |     | 65  |     | 193   | 4     | 4      | NU 330 E  |         |     |    |    |         | 755000  | 920000  | 1600   | 1900    | 168            | 190            | 195            | 213                        | 302            |                |                |                 | 3    | 3    | 28.8 |        | HJ 330 E       | 150            | 210            | 15             | 25      | 4    | 2.26  |              |  |  |  |  |  |
| 320       |     | 108 |     | 193   | 4     | 4      | NU 2330   | NJ      | NUP |    |    |         | 1020000 | 1400000 | 1700   | 2000    | 168            | 190            | 195            | 213                        | 302            |                |                |                 | 3    | 3    | 44.7 |        | HJ 2330        | 150            | 210            | 15             | 34      | 4    | 2.62  |              |  |  |  |  |  |
| 320       |     | 108 |     | 193   | 4     | 4      | NU 2330 E |         |     |    |    |         | 1160000 | 1600000 | 1600   | 1900    | 168            | 190            | 195            | 213                        | 302            |                |                |                 | 3    | 3    | 48.2 |        | HJ 2330 E      | 150            | 210            | 15             | 31.5    | 4    | 2.52  |              |  |  |  |  |  |
| 380       |     | 85  | 317 | 213   | 5     | 5      | NU 430    | NJ      | NUP | N  | NF | NP      | 930000  | 1120000 | 1300   | 1600    | 172            | 172            | 210            | 216                        | 237            | 358            | 358            | 319             | 4    | 4    | 54.5 | 53.3   | HJ 430         | 150            | 234            | 20             | 36.5    | 5    | 4.61  |              |  |  |  |  |  |
| 160       |     | 240 | 38  | 220   | 180   | 2.1    | 1.5       | NU 1032 |     |    | N  |         |         | 229000  | 325000 | 2400    | 3000           | 171            | 168.5          | 178                        | 184            | 194            | 228            | 232             | 220  | 2    | 1.5  | 6.01   | 5.93           |                |                |                |         |      |       |              |  |  |  |  |  |
|           | 290 | 48  | 255 | 195   | 3     | 3      | NU 232    | NJ      | NUP | N  | NF | NP      | 425000  | 570000  | 1800   | 2200    | 174            | 174            | 192            | 197                        | 210            | 276            | 276            | 262             | 2.5  | 2.5  | 14.5 | 14.2   | HJ 232         | 160            | 207            | 12             | 21      | 3    | 1.44  |              |  |  |  |  |  |
|           | 290 | 48  |     | 195   | 3     | 3      | NU 232 E  |         |     |    |    |         | 500000  | 665000  | 1700   | 2000    | 174            | 192            | 197            | 210                        | 276            |                |                |                 | 2.5  | 2.5  | 15.6 |        | HJ 232 E       | 160            | 207.3          | 12             | 20      | 3    | 1.43  |              |  |  |  |  |  |
|           | 290 | 80  |     | 195   | 3     | 3      | NU 2232   | NJ      | NUP |    |    |         | 630000  | 940000  | 1800   | 2200    | 174            | 192            | 197            | 210                        | 276            |                |                |                 | 2.5  | 2.5  | 24.1 |        | HJ 2232        | 160            | 205            | 12             | 28      | 3    | 1.50  |              |  |  |  |  |  |
|           | 290 | 80  |     | 195   | 3     | 3      | NU 2232 E |         |     |    |    |         | 810000  | 1190000 | 1700   | 2000    | 174            | 192            | 197            | 210                        | 276            |                |                |                 | 2.5  | 2.5  | 25.9 |        | HJ 2232 E      | 160            | 208.1          | 12             | 24.5    | 3    | 1.54  |              |  |  |  |  |  |
|           | 340 | 68  | 292 | 208   | 4     | 4      | NU 332    | NJ      | NUP | N  | NF | NP      | 695000  | 875000  | 1600   | 1900    | 178            | 200            | 211            | 228                        | 322            | 322            | 304            | 3               | 3    | 31.2 | 30.6 | HJ 332 | 160            | 225            | 15             | 28             | 4       | 2.71 |       |              |  |  |  |  |  |
|           | 340 | 68  |     | 204   | 4     | 4      | NU 332 E  |         |     |    |    |         | 855000  | 1050000 | 1700   | 2000    | 178            | 200            | 211            | 228                        | 322            |                |                |                 | 3    | 3    | 34.1 |        | HJ 332 E       | 160            | 222.1          | 15             | 25      | 4    | 2.49  |              |  |  |  |  |  |
|           | 340 | 114 |     | 208   | 4     | 4      | NU 2332   | NJ      | NUP |    |    |         | 1040000 | 1460000 | 1500   | 1800    | 178            | 200            | 211            | 228                        | 322            |                |                |                 | 3    | 3    | 52.5 |        | HJ 2332        | 160            |                |                |         |      |       |              |  |  |  |  |  |

円筒ころ軸受

内径：180～500mm



L形 つば輪

1N = 0.102kgf

| 主要寸法 (mm) |     |     |     |     |      | 呼び番号    |           |     |     |   |    | 基本動格荷重  |         | 基本静格荷重  |      | 許容回転数 (rpm) <sup>(1)</sup> |      | 取付関係寸法 (mm) |      |      |      |      |      |      |      | 質量 (kg) |      | L形つば輪寸法 (mm) |         |       |       |      |      |      |      |  |
|-----------|-----|-----|-----|-----|------|---------|-----------|-----|-----|---|----|---------|---------|---------|------|----------------------------|------|-------------|------|------|------|------|------|------|------|---------|------|--------------|---------|-------|-------|------|------|------|------|--|
| d         | D   | B   | Ew  | Fw  | r    | r1      | NU        | NJ  | NUP | N | NF | NP      | Cr(N)   | Cor(N)  | グリース | 油潤滑                        | da   | db          | dc   | dd   | Da   | Db   | ra   | ra1  | NU   | N       | 呼び番号 | d            | d1      | B1    | B2    | r1   | 質量   |      |      |  |
|           |     |     |     |     | (最小) | (最小)    |           |     |     |   |    |         |         |         |      |                            | (最小) | (最小)        | (最大) | (最小) | (最小) | (最小) | (最大) | (最大) | (最大) | (最大)    |      |              | (最大)    |       |       | (最小) | (参考) |      |      |  |
| 180       | 280 | 46  | 255 | 205 | 2.1  | 2.1     | NU 1036   |     |     | N |    |         | 340000  | 485000  | 2100 | 2600                       | 191  | 192         | 203  | 209  | 268  | 269  | 256  | 2    | 2    | 10.8    | 10.5 |              |         |       |       |      |      |      |      |  |
|           | 320 | 52  | 282 | 218 | 4    | 4       | NU 236    | NJ  | NUP | N | NF | NP      | 490000  | 675000  | 1700 | 2000                       | 198  | 198         | 214  | 221  | 233  | 302  | 302  | 294  | 3    | 3       | 19.3 | 18.3         | HJ 236  | 180   | 230.5 | 12   | 22   | 4    | 1.76 |  |
|           | 320 | 52  |     | 217 | 4    | 4       | NU 236 E  |     |     |   |    |         | 625000  | 850000  | 1800 | 2200                       | 198  | 214         | 221  | 233  | 302  | 302  |      | 3    | 3    | 20.5    |      | HJ 236 E     | 180     | 230.8 | 12    | 20   | 4    | 1.73 |      |  |
|           | 320 | 86  |     | 218 | 4    | 4       | NU 2236   | NJ  | NUP |   |    |         | 775000  | 1210000 | 1700 | 2000                       | 198  | 214         | 221  | 233  | 302  | 302  |      | 3    | 3    | 30.4    |      | HJ 2236      | 180     | 229   | 12    | 29   | 4    | 1.87 |      |  |
|           | 320 | 86  |     | 215 | 4    | 4       | NU 2236 E |     |     |   |    |         | 1010000 | 1510000 | 1800 | 2200                       | 198  | 214         | 221  | 233  | 302  | 302  |      | 3    | 3    | 34.5    |      | HJ 2236 E    | 180     | 229.5 | 12    | 24   | 4    | 1.85 |      |  |
|           | 380 | 75  | 328 | 232 | 4    | 4       | NU 336    | NJ  | NUP | N | NF | NP      | 900000  | 1150000 | 1500 | 1800                       | 198  | 198         | 227  | 235  | 255  | 362  | 362  | 332  | 3    | 3       | 42.8 | 41.9         | HJ 336  | 180   | 252   | 17   | 30.5 | 4    | 3.80 |  |
| 380       | 126 |     | 232 | 4   | 4    | NU 2336 | NJ        | NUP |     |   |    | 1310000 | 1860000 | 1300    | 1600 | 198                        | 198  | 227         | 235  | 255  | 362  | 362  |      | 3    | 3    | 73.1    |      | HJ 2336      | 180     | 252   | 17    | 40   | 4    | 4.35 |      |  |
| 190       | 290 | 46  | 265 | 215 | 2.1  | 2.1     | NU 1038   |     |     | N |    |         | 345000  | 510000  | 2000 | 2600                       | 201  | 202         | 213  | 219  | 278  | 279  | 266  | 2    | 2    | 11.2    | 10.9 |              |         |       |       |      |      |      |      |  |
|           | 340 | 56  | 299 | 231 | 4    | 4       | NU 238    | NJ  | NUP | N | NF | NP      | 555000  | 770000  | 1600 | 1900                       | 208  | 208         | 227  | 234  | 247  | 322  | 322  | 311  | 3    | 3       | 22.6 | 22.1         | HJ 238  | 190   | 244.5 | 13   | 23.5 | 4    | 2.16 |  |
|           | 340 | 56  |     | 230 | 4    | 4       | NU 238 E  |     |     |   |    |         | 695000  | 955000  | 1700 | 2000                       | 208  | 227         | 234  | 247  | 322  | 322  |      | 3    | 3    | 26.0    |      | HJ 238 E     | 190     | 244.5 | 13    | 21.5 | 4    | 2.11 |      |  |
|           | 340 | 92  |     | 231 | 4    | 4       | NU 2238   | NJ  | NUP |   |    |         | 825000  | 1290000 | 1600 | 1900                       | 208  | 227         | 234  | 247  | 322  | 322  |      | 3    | 3    | 37.5    |      | HJ 2238      | 190     | 243   | 13    | 31.5 | 4    | 2.32 |      |  |
|           | 340 | 92  |     | 228 | 4    | 4       | NU 2238 E |     |     |   |    |         | 1100000 | 1670000 | 1700 | 2000                       | 208  | 227         | 234  | 247  | 322  | 322  |      | 3    | 3    | 45.2    |      | HJ 2238 E    | 190     | 243.2 | 13    | 26.5 | 4    | 2.28 |      |  |
|           | 400 | 78  | 345 | 245 | 5    | 5       | NU 338    | NJ  | NUP | N | NF | NP      | 975000  | 1260000 | 1400 | 1700                       | 212  | 212         | 240  | 248  | 268  | 378  | 378  | 349  | 4    | 4       | 49.4 | 48.3         | HJ 338  | 190   | 265   | 18   | 32   | 5    | 4.36 |  |
| 400       | 132 |     | 245 | 5   | 5    | NU 2338 | NJ        | NUP |     |   |    | 1440000 | 2070000 | 1200    | 1500 | 212                        | 212  | 240         | 248  | 268  | 378  | 378  |      | 4    | 4    | 85.0    |      | HJ 2338      | 190     | 265   | 18    | 41.5 | 5    | 4.92 |      |  |
| 200       | 310 | 51  | 281 | 229 | 2.1  | 2.1     | NU 1040   |     |     | N |    |         | 375000  | 555000  | 1900 | 2400                       | 211  | 212         | 226  | 233  | 298  | 299  | 283  | 2    | 2    | 14.4    | 14.1 |              |         |       |       |      |      |      |      |  |
|           | 360 | 58  | 316 | 244 | 4    | 4       | NU 240    | NJ  | NUP | N | NF | NP      | 615000  | 865000  | 1500 | 1800                       | 218  | 218         | 240  | 247  | 342  | 342  | 328  | 3    | 3    | 26.8    | 26.2 | HJ 240       | 200     | 258   | 14    | 25   | 4    | 2.59 |      |  |
|           | 360 | 58  |     | 243 | 4    | 4       | NU 240 E  |     |     |   |    |         | 765000  | 1060000 | 1600 | 1900                       | 218  | 240         | 247  | 261  | 342  | 342  |      | 3    | 3    | 29.5    |      | HJ 240 E     | 200     | 258.2 | 14    | 23   | 4    | 2.54 |      |  |
|           | 360 | 98  |     | 244 | 4    | 4       | NU 2240   | NJ  | NUP |   |    |         | 920000  | 1440000 | 1500 | 1800                       | 218  | 240         | 247  | 261  | 342  | 342  |      | 3    | 3    | 45.4    |      | HJ 2240      | 200     | 258   | 14    | 34   | 4    | 2.95 |      |  |
|           | 360 | 98  |     | 241 | 4    | 4       | NU 2240 E |     |     |   |    |         | 1210000 | 1870000 | 1500 | 1700                       | 218  | 240         | 247  | 261  | 342  | 342  |      | 3    | 3    | 52.3    |      | HJ 2240 E    | 200     | 256.9 | 14    | 28   | 4    | 2.73 |      |  |
|           | 420 | 80  | 360 | 260 | 5    | 5       | NU 340    | NJ  | NUP | N | NF | NP      | 975000  | 1270000 | 1300 | 1600                       | 222  | 222         | 254  | 263  | 283  | 398  | 398  | 364  | 4    | 4       | 55.8 | 54.5         | HJ 340  | 200   | 280   | 18   | 33   | 5    | 4.91 |  |
| 420       | 138 |     | 260 | 5   | 5    | NU 2340 | NJ        | NUP |     |   |    | 1440000 | 2090000 | 1100    | 1400 | 222                        | 222  | 254         | 263  | 283  | 398  | 398  |      | 4    | 4    | 96.8    |      | HJ 2340      | 200     | 280   | 18    | 44.5 | 5    | 5.63 |      |  |
| 220       | 340 | 56  | 310 | 250 | 3    | 3       | NU 1044   |     |     | N |    |         | 480000  | 715000  | 1800 | 2300                       | 233  | 234         | 248  | 254  | 326  | 327  | 311  | 2.5  | 2.5  | 18.8    | 18.5 |              |         |       |       |      |      |      |      |  |
|           | 400 | 65  | 350 | 270 | 4    | 4       | NU 244    | NJ  | NUP | N | NF | NP      | 760000  | 1080000 | 1500 | 1700                       | 238  | 238         | 266  | 273  | 289  | 382  | 382  | 362  | 3    | 3       | 37.8 | 37.0         | HJ 244  | 220   | 286   | 15   | 27.5 | 4    | 3.53 |  |
|           | 400 | 108 |     | 270 | 4    | 4       | NU 2244   |     |     |   |    |         | 1130000 | 1810000 | 1400 | 1700                       | 238  | 238         | 266  | 273  | 289  | 382  | 382  |      | 3    | 3       | 61.8 |              | HJ 2244 | 220   | 286   | 15   | 36.5 | 4    | 3.99 |  |
|           | 460 | 88  | 396 | 284 | 5    | 5       | NU 344    | NJ  | NUP | N | NF | NP      | 1200000 | 1570000 | 1200 | 1500                       | 242  | 242         | 279  | 287  | 307  | 438  | 438  | 400  | 4    | 4       | 73.6 | 71.7         | HJ 344  | 220   | 307   | 20   | 36   | 5    | 6.53 |  |
| 240       | 360 | 56  | 330 | 270 | 3    | 3       | NU 1048   |     |     | N |    |         | 500000  | 755000  | 1700 | 2100                       | 253  | 254         | 268  | 275  | 346  | 347  | 331  | 2.5  | 2.5  | 20.4    | 20.1 |              |         |       |       |      |      |      |      |  |
|           | 440 | 72  | 385 | 295 | 4    | 4       | NU 248    | NJ  | NUP | N | NF | NP      | 935000  | 1340000 | 1400 | 1600                       | 258  | 258         | 293  | 298  | 316  | 422  | 422  | 397  | 3    | 3       | 51.1 | 50.0         | HJ 248  | 240   | 313   | 16   | 29.5 | 4    | 4.57 |  |
|           | 440 | 120 |     | 295 | 4    | 4       | NU 2248   |     |     |   |    |         | 1430000 | 2320000 | 1300 | 1600                       | 262  | 262         | 303  | 313  | 333  | 478  | 478  | 434  | 4    | 4       | 83.5 |              | HJ 2248 | 240   | 313   | 16   | 38.5 | 4    | 5.14 |  |
|           | 500 | 95  | 430 | 310 | 5    | 5       | NU 348    | NJ  | NUP | N | NF | NP      | 1430000 | 1950000 | 1100 | 1300                       | 262  | 262         | 303  | 313  | 333  | 478  | 478  |      | 4    | 4       | 93.0 | 90.9         | HJ 348  | 240   | 335   | 22   | 39.5 | 5    | 8.55 |  |
| 260       | 400 | 65  | 364 | 296 | 4    | 4       | NU 1052   |     |     | N |    |         | 620000  | 955000  | 1600 | 1800                       | 278  | 278         | 292  | 300  | 382  | 382  | 365  | 3    | 3    | 29.6    | 29.2 |              |         |       |       |      |      |      |      |  |
|           | 480 | 85  | 420 | 320 | 5    | 5       | NU 252    | NJ  | NUP | N | NF | NP      | 1140000 | 1660000 | 1300 | 1500                       | 282  | 282         | 318  | 323  | 343  | 458  | 458  | 432  | 4    | 4       | 69.0 | 66.7         | HJ 252  | 260   | 340   | 18   | 33   | 5    | 6.12 |  |
|           | 480 | 130 |     | 320 | 5    | 5       | NU 2252   |     |     |   |    |         | 1780000 | 2930000 | 1100 | 1300                       | 282  | 282         | 318  | 323  | 343  | 458  | 458  |      | 4    | 4       | 106  |              | HJ 2252 | 260   | 340   | 18   | 40.5 | 5    | 6.69 |  |
|           | 540 | 102 | 464 | 336 | 6    | 6       | NU 352    | NJ  | NUP | N | NF | NP      | 1620000 | 2230000 | 1000 | 1200                       | 288  | 288         | 331  | 339  | 359  | 512  | 512  | 468  | 5    | 5       | 117  | 114          | HJ 352  | 260   | 362   | 24   | 43   | 6    | 8.77 |  |
| 280       | 420 | 65  | 384 | 316 | 4    | 4       | NU 1056   |     |     | N |    |         | 630000  | 1000000 | 1500 | 1700                       | 298  | 298         | 313  | 320  | 402  | 402  | 385  | 3    | 3    | 33.0    | 32.5 |              |         |       |       |      |      |      |      |  |
|           | 500 | 80  | 440 | 340 | 5    | 5       | NU 256    | NJ  | NUP | N | NF | NP      | 1140000 | 1680000 | 1200 | 1400                       | 302  | 302         | 336  | 343  | 365  | 478  | 478  | 452  | 4    | 4       | 71.5 | 70.0         | HJ 256  | 280   | 360   | 18   | 33   | 5    | 6.52 |  |
| 300       | 460 | 74  | 420 | 340 | 4    | 4       | NU 1060   |     |     | N |    |         | 845000  | 1340000 | 1400 | 1500                       | 318  | 318         | 337  | 344  | 442  | 442  | 421  | 3    | 3    | 44.7    | 44.1 |              |         |       |       |      |      |      |      |  |
|           | 540 | 85  | 476 | 364 | 5    | 5       | NU 260    | NJ  | NUP | N | NF | NP      | 1400000 | 2070000 | 1100 | 1300                       | 322  | 322         | 361  | 368  | 392  | 518  | 518  | 487  | 4    | 4       | 88.9 | 87.0         | HJ 260  | 300   | 387   | 20   | 34.5 | 5    | 8.33 |  |
| 320       | 480 | 74  | 440 | 360 | 4    | 4       | NU 1064   |     |     | N |    |         | 870000  | 1410000 | 1300 | 1400                       | 338  |             |      |      |      |      |      |      |      |         |      |              |         |       |       |      |      |      |      |  |