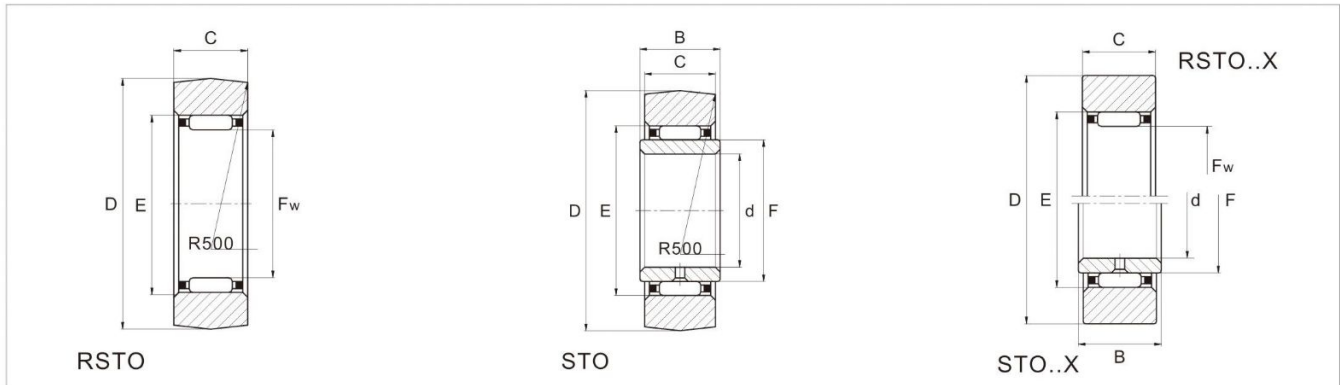


## ■ 支承滚轮

## Yoke type track rollers



| 外径<br>Outside<br>Diameter | 轴承型号与近似重量 <sup>注1</sup><br>Bearing Designation and mass approx |            |                |            | 外形尺寸<br>Boundary Dimensions |    |                       |    |      |    | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |        | 极限转速<br>Limiting<br>Speed   |
|---------------------------|--|------------|----------------|------------|-----------------------------|----|-----------------------|----|------|----|---|----------------|--------|--------|-----------------------------|
|                           | 无内圈<br>Without IR  | 重量<br>Mass | 带内圈<br>With IR | 重量<br>Mass | D                           | d  | F <sub>注1</sub><br>Fw | B  | C    | E  | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为支承滚轮 |        | 脂润滑 <sup>注3</sup><br>Grease |
|                           |  |            |                |            |                             |    |                       |    |      |    |   |                | 动Cw    | 静Cow   |                             |
| mm                        |  | g          |                | g          | mm                          |    |                       |    |      |    | N   |                | rpm    |        |                             |
| 16                        | RSTO 5 TN  | 8.5        | -              | -          | 16                          | -  | 7                     | -  | 7.8  | 10 | 2 800                                     | 2 600          | 2 550  | 2 550  | 23 000                      |
|                           | RSTO 5 TN X  | 8.5        | -              | -          | 16                          | -  | 7                     | -  | 7.8  | 10 | 2 800                                     | 2 600          | 1 990  | 1 990  | 23 000                      |
| 19                        | RSTO 6 TN  | 12.5       | STO 6 TN       | 17         | 19                          | 6  | 10                    | 10 | 9.8  | 13 | 4 700                                     | 5 450          | 3 750  | 4 500  | 20 000                      |
|                           | RSTO 6 TN X  | 12.5       | STO 6 TN X     | 17         | 19                          | 6  | 10                    | 10 | 9.8  | 13 | 4 700                                     | 5 450          | 3 050  | 4 000  | 20 000                      |
| 24                        | RSTO 8 TN  | 21         | STO 8 TN       | 26         | 24                          | 8  | 12                    | 10 | 9.8  | 15 | 4 800                                     | 6 000          | 4 200  | 5 500  | 16 000                      |
|                           | RSTO 8 TN X  | 21         | STO 8 TN X     | 26         | 24                          | 8  | 12                    | 10 | 9.8  | 15 | 4 800                                     | 6 000          | 3 000  | 5 000  | 16 000                      |
| 30                        | RSTO 10  | 42         | STO 10         | 49         | 30                          | 10 | 14                    | 12 | 11.8 | 20 | 10 200                                    | 10 500         | 8 400  | 9 200  | 11 000                      |
|                           | RSTO 10 X  | 42         | STO 10 X       | 49         | 30                          | 10 | 14                    | 12 | 11.8 | 20 | 10 200                                    | 10 500         | 8 000  | 8 800  | 11 000                      |
| 32                        | RSTO 12  | 49         | STO 12         | 57         | 32                          | 12 | 16                    | 12 | 11.8 | 22 | 11 300                                    | 12 300         | 8 900  | 10 100 | 9 000                       |
|                           | RSTO 12 X  | 49         | STO 12 X       | 57         | 32                          | 12 | 16                    | 12 | 11.8 | 22 | 11 300                                    | 12 300         | 8 500  | 9 600  | 9 000                       |
| 35                        | RSTO 15  | 50         | STO 15         | 63         | 35                          | 15 | 20                    | 12 | 11.8 | 26 | 13 200                                    | 16 000         | 9 100  | 10 700 | 6 500                       |
|                           | RSTO 15 X  | 50         | STO 15 X       | 63         | 35                          | 15 | 20                    | 12 | 11.8 | 26 | 13 200                                    | 16 000         | 8 700  | 9 900  | 6 500                       |
| 40                        | RSTO 17  | 88         | STO 17         | 107        | 40                          | 17 | 22                    | 16 | 15.8 | 29 | 19 800                                    | 25 300         | 14 300 | 17 700 | 5 500                       |
|                           | RSTO 17 X  | 88         | STO 17 X       | 107        | 40                          | 17 | 22                    | 16 | 15.8 | 29 | 19 800                                    | 25 300         | 12 500 | 15 700 | 5 500                       |
| 47                        | RSTO 20  | 130        | STO 20         | 152        | 47                          | 20 | 25                    | 16 | 15.8 | 32 | 20 800                                    | 27 800         | 16 200 | 21 500 | 4 700                       |
|                           | RSTO 20 X  | 130        | STO 20 X       | 152        | 47                          | 20 | 25                    | 16 | 15.8 | 32 | 20 800                                    | 27 800         | 15 000 | 19 900 | 4 700                       |
| 52                        | RSTO 25  | 150        | STO 25         | 177        | 52                          | 25 | 30                    | 16 | 15.8 | 37 | 23 000                                    | 33 400         | 16 500 | 22 900 | 3 600                       |
|                           | RSTO 25 X  | 150        | STO 25 X       | 177        | 52                          | 25 | 30                    | 16 | 15.8 | 37 | 23 000                                    | 33 400         | 14 000 | 20 900 | 3 600                       |
| 62                        | RSTO 30  | 255        | STO 30         | 308        | 62                          | 30 | 38                    | 20 | 19.8 | 46 | 35 200                                    | 56 700         | 23 300 | 35 000 | 2 500                       |
|                           | RSTO 30 X  | 255        | STO 30 X       | 308        | 62                          | 30 | 38                    | 20 | 19.8 | 46 | 33 200                                    | 56 700         | 21 800 | 33 000 | 2 500                       |
| 72                        | RSTO 35  | 375        | STO 35         | 441        | 72                          | 35 | 42                    | 20 | 19.8 | 50 | 35 800                                    | 58 800         | 26 000 | 41 000 | 2 200                       |
|                           | RSTO 35 X  | 375        | STO 35 X       | 441        | 72                          | 35 | 42                    | 20 | 19.8 | 50 | 35 800                                    | 58 800         | 24 500 | 38 900 | 2 200                       |
| 80                        | RSTO 40  | 420        | STO 40         | 530        | 80                          | 40 | 50                    | 20 | 19.8 | 58 | 35 200                                    | 61 800         | 24 000 | 39 000 | 1 700                       |
|                           | RSTO 40 X  | 420        | STO 40 X       | 530        | 80                          | 40 | 50                    | 20 | 19.8 | 58 | 35 200                                    | 61 800         | 22 500 | 36 500 | 1 700                       |
| 85                        | RSTO 45  | 453        | STO 45         | 576        | 85                          | 45 | 55                    | 20 | 19.8 | 63 | 38 900                                    | 73 900         | 25 500 | 43 000 | 1 500                       |
|                           | RSTO 45 X  | 453        | STO 45 X       | 576        | 85                          | 45 | 55                    | 20 | 19.8 | 63 | 38 900                                    | 73 900         | 24 000 | 41 500 | 1 500                       |
| 90                        | RSTO 50  | 481        | STO 50         | 617        | 90                          | 50 | 60                    | 20 | 19.8 | 68 | 43 300                                    | 84 800         | 26 000 | 46 500 | 1 300                       |
|                           | RSTO 50 X  | 481        | STO 50 X       | 617        | 90                          | 50 | 60                    | 20 | 19.8 | 68 | 43 300                                    | 84 800         | 22 800 | 44 000 | 1 300                       |

TN=塑料保持架, 允许工作温度:120℃连续; 180℃短期。

1) F 是内圈滚道直径, F<sub>w</sub> 是具 F 6 公差范围内的滚针内切圆直径。

2) 当轴承外圈 (有外圆柱表面) 装入具有一般配合的座孔中时, 使用基本额定负荷 C 和 C<sub>0</sub>; 当用作支承滚轮时, 使用额定负荷 C<sub>w</sub> 和 C<sub>w0</sub>。

3) 使用油润滑时, 极限转速增加约 30%。

1) TN=plastic cage, permissible operating temperature:+120℃(continuous operation).

F = raceway diameter of inner ring.

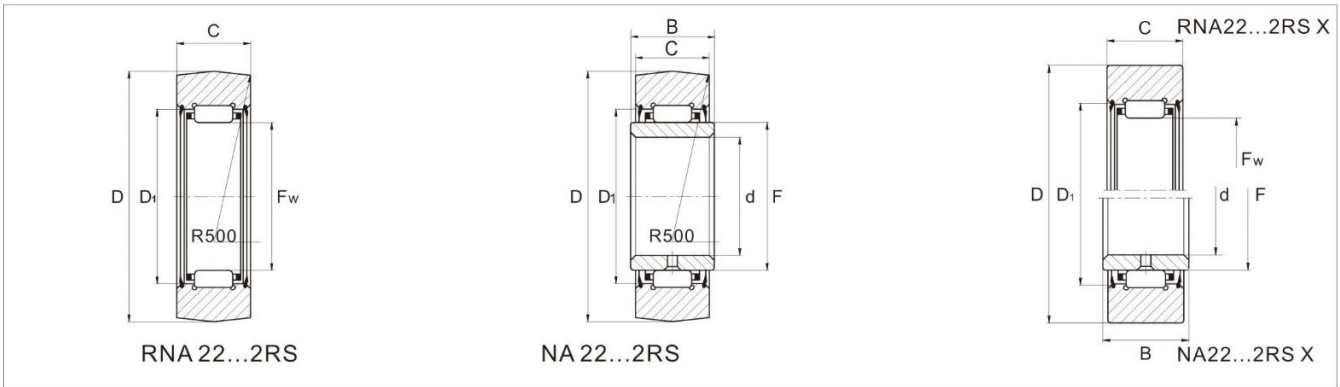
F<sub>w</sub> = needle roller enveloping circle in the tolerance zone F6.

2) The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller, the load ratings C<sub>w</sub> and C<sub>w0</sub> apply.

3) Limiting speed for grease lubrication. with oil lubrication, the speed can be increased by approximately 30%.

## ■ 支承滚轮

## Yoke type track rollers



| 外径<br>Outside<br>Diameter | 轴承型号与近似重量 <sup>注1</sup><br>Bearing Designation and mass approx |                 |                |                 | 外形尺寸<br>Boundary Dimensions |      |                 |    |      |    | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |        | 极限转速<br>Limiting<br>Speed   |
|---------------------------|--|-----------------|----------------|-----------------|-----------------------------|------|-----------------|----|------|----|---|----------------|--------|--------|-----------------------------|
|                           | 无内圈<br>Without IR  | 重量<br>Mass<br>g | 带内圈<br>With IR | 重量<br>Mass<br>g | D                           | d    | F <sub>注1</sub> | B  | C    | E  | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为支承滚轮 |        | 脂润滑 <sup>注3</sup><br>Grease |
|                           |  |                 |                |                 | 动Cw                         | 静Cow | rpm             |    |      |    |   |                |        |        |                             |
| mm                        |  |                 |                |                 | mm                          |      |                 |    |      |    | N   |                |        | rpm    |                             |
| 19                        | RNA 22/6.2RS   | 18              | NA 22/6.2RS    | 22              | 19                          | 6    | 10              | 12 | 11.8 | 16 | 5 000                                     | 4 350          | 3 050  | 3 000  | 18 000                      |
|                           | RNA 22/6.2RS X   | 18              | NA 22/6.2RS X  | 22              | 19                          | 6    | 10              | 12 | 11.8 | 16 | 5 000                                     | 4 350          | 3 900  | 3 700  | 18 000                      |
| 24                        | RN 22/8.2RS  | 29              | NA22/8.2RS     | 34              | 24                          | 8    | 12              | 12 | 11.8 | 18 | 5 500                                     | 5 200          | 4 800  | 4 800  | 14 000                      |
|                           | RNA 22/8.2RS X   | 29              | NA22/8.2RS X   | 34              | 24                          | 8    | 12              | 12 | 11.8 | 18 | 5 500                                     | 5 200          | 4 050  | 4 050  | 14 000                      |
| 30                        | RNA 2200.2RS   | 52              | NA 2200.2RS    | 60              | 30                          | 10   | 14              | 14 | 13.8 | 20 | 7 600                                     | 8 100          | 7 000  | 8 000  | 11 000                      |
|                           | RNA 2200.2RS X   | 52              | NA 2200.2RS X  | 60              | 30                          | 10   | 14              | 14 | 13.8 | 20 | 7 600                                     | 8 100          | 6 500  | 7 050  | 11 000                      |
| 32                        | RNA 2201.2RS   | 57              | NA2201.2RS     | 67              | 32                          | 12   | 16              | 14 | 13.8 | 22 | 8 500                                     | 9 700          | 7 500  | 9 000  | 9 500                       |
|                           | RNA 2201.2RS X   | 57              | NA2201.2RS X   | 67              | 32                          | 12   | 16              | 14 | 13.8 | 22 | 8 500                                     | 9 700          | 7 050  | 8 950  | 9 500                       |
| 35                        | RNA 2202.2RS   | 60              | NA 2202.2RS    | 75              | 35                          | 15   | 20              | 14 | 13.8 | 26 | 9 600                                     | 12 000         | 7 600  | 9 600  | 7 000                       |
|                           | RNA 2202.2RS X   | 60              | NA 2202.2RS X  | 75              | 35                          | 15   | 20              | 14 | 13.8 | 26 | 9 600                                     | 12 000         | 7 050  | 9 080  | 7 000                       |
| 40                        | RNA 2203.2RS   | 94              | NA 2203.2RS    | 112             | 40                          | 17   | 22              | 16 | 15.8 | 28 | 12 000                                    | 16 500         | 9 900  | 13 800 | 6 000                       |
|                           | RNA 2203.2RS X   | 94              | NA 2203.2RS X  | 112             | 40                          | 17   | 22              | 16 | 15.8 | 28 | 12 000                                    | 16 500         | 9 090  | 11 800 | 6 000                       |
| 47                        | RNA 2204.2RS   | 152             | NA 2204.2RS    | 177             | 47                          | 20   | 25              | 18 | 17.8 | 33 | 18 500                                    | 21 900         | 15 200 | 18 300 | 4 600                       |
|                           | RNA 2204.2RS X   | 152             | NA 2204.2RS X  | 177             | 47                          | 20   | 25              | 18 | 17.8 | 33 | 18 500                                    | 21 900         | 13 500 | 16 500 | 4 600                       |
| 52                        | RNA 2205.2RS   | 179             | NA 2205.2RS    | 209             | 52                          | 25   | 30              | 18 | 17.8 | 38 | 20 100                                    | 26 000         | 15 700 | 20 000 | 3 500                       |
|                           | RNA 2205.2RS X   | 179             | NA 2205.2RS X  | 209             | 52                          | 25   | 30              | 18 | 17.8 | 38 | 20 100                                    | 26 000         | 13 500 | 18 900 | 3 500                       |
| 62                        | RNA 2206.2RS   | 284             | NA 2206.2RS    | 324             | 62                          | 30   | 35              | 20 | 19.8 | 43 | 23 000                                    | 28 000         | 18 300 | 25 500 | 2 800                       |
|                           | RNA 2206.2RS X   | 284             | NA 2206.2RS X  | 324             | 62                          | 30   | 35              | 20 | 19.8 | 43 | 23 000                                    | 28 000         | 17 500 | 23 500 | 2 800                       |
| 72                        | RNA 2207.2RS   | 432             | NA 2207.2RS    | 505             | 72                          | 35   | 42              | 23 | 22.7 | 50 | 29 800                                    | 46 300         | 23 000 | 35 500 | 2 200                       |
|                           | RNA 2207.2RS X   | 432             | NA 2207.2RS X  | 505             | 72                          | 35   | 42              | 23 | 22.7 | 50 | 29 800                                    | 46 300         | 20 500 | 32 500 | 2 200                       |
| 80                        | RNA 2208.2RS   | 530             | NA 2208.2RS    | 628             | 80                          | 40   | 48              | 23 | 22.7 | 57 | 38 200                                    | 57 700         | 27 500 | 40 500 | 1 700                       |
|                           | RNA 2208.2RS X   | 530             | NA 2208.2RS X  | 628             | 80                          | 40   | 48              | 23 | 22.7 | 57 | 38 200                                    | 57 700         | 25 000 | 38 000 | 1 700                       |
| 85                        | RNA 2209.2RS   | 545             | NA 2209.2RS    | 655             | 85                          | 45   | 52              | 23 | 22.7 | 62 | 40 300                                    | 63 800         | 28 500 | 43 000 | 1 600                       |
|                           | RNA 2209.2RS X   | 545             | NA 2209.2RS X  | 655             | 85                          | 45   | 52              | 23 | 22.7 | 62 | 40 300                                    | 63 800         | 26 000 | 41 000 | 1 600                       |
| 90                        | RNA 2210.2RS   | 563             | NA 2210.2RS    | 690             | 90                          | 50   | 58              | 23 | 22.7 | 68 | 42 100                                    | 66 000         | 28 000 | 42 500 | 1 300                       |
|                           | RNA 2210.2RS X   | 563             | NA 2210.2RS X  | 690             | 90                          | 50   | 58              | 23 | 22.7 | 68 | 42 100                                    | 66 000         | 26 000 | 40 500 | 1 300                       |

1) F 是内圈滚道直径，F<sub>w</sub> 是具 F 6 公差范围内的滚针内切圆直径。

2) 当轴承外圈（有外圆柱表面）装入具有一般配合的座孔中时，使用基本额定负荷 Cr 和 Cor；当用作滚轮时，使用额定负荷 Cw 和 Cow。

3) 使用油润滑时，极限转速增加约 30%。

1) F = raceway diameter of inner ring.

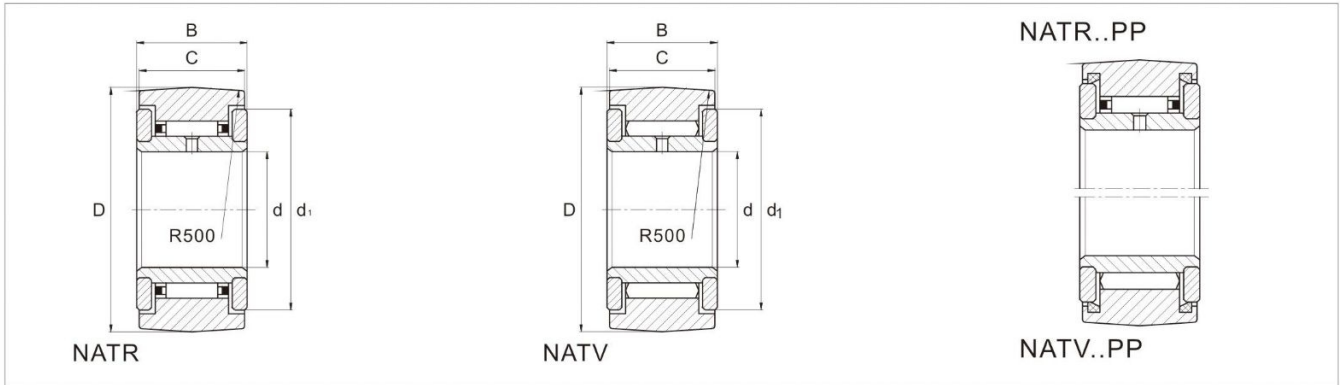
F<sub>w</sub> = needle roller enveloping circle in the tolerance zone F6.

2) The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller, the load ratings C<sub>w</sub> and C<sub>w0</sub> apply.

3) Limiting speed for grease lubrication. For oil lubrication, the speed can be increased by approximately 30%.

■ 支承滚轮

Yoke type track rollers



| 外径<br>Outside<br>Diameter | 轴承型号与近似重量 <sup>注1</sup><br>Bearing Designation and mass approx |            |               |            | 外形尺寸<br>Boundary Dimensions |    |    |    |    | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |        | 极限转速<br>Limiting<br>Speed   |
|---------------------------|--|------------|---------------|------------|-----------------------------|----|----|----|----|---|----------------|--------|--------|-----------------------------|
|                           | 不带密封<br>Without seal   | 重量<br>Mass | 带密封<br>Sealed | 重量<br>Mass | d                           | D  | B  | C  | d1 | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为支承滚轮 |        | 脂润滑 <sup>注3</sup><br>Grease |
|                           |  |            |               |            | g                           | g  | mm |    |    |   |                | N      |        |                             |
| 16                        | NATR 5   | 14         | NATR 5 PP     | 14         | 5                           | 16 | 12 | 11 | 12 | 3 050                                     | 3 000          | 2 050  | 2 400  | 22 000                      |
|                           | NATV 5   | 15         | NATV 5 PP     | 15         | 5                           | 16 | 12 | 11 | 12 | 4 500                                     | 6 300          | 3 680  | 4 300  | 8 500                       |
| 19                        | NATR 6   | 20         | NATR 6 PP     | 20         | 6                           | 19 | 12 | 11 | 14 | 3 600                                     | 3 650          | 2 450  | 2 850  | 20 000                      |
|                           | NATV 6   | 21         | NATV 6 PP     | 21         | 6                           | 19 | 12 | 11 | 14 | 5 700                                     | 8 700          | 4 600  | 6 750  | 7 000                       |
| 24                        | NATR 8   | 41         | NATR 8 PP     | 41         | 8                           | 24 | 15 | 14 | 19 | 4 500                                     | 5 400          | 3 900  | 4 500  | 5 000                       |
|                           | NATV 8   | 42         | NATV 8 PP     | 42         | 8                           | 24 | 15 | 14 | 19 | 8 600                                     | 12 000         | 6 700  | 9 800  | 5 500                       |
| 30                        | NATR 10  | 64         | NATR 10 PP    | 64         | 10                          | 30 | 15 | 14 | 23 | 6 100                                     | 7 800          | 4 500  | 6 900  | 11 000                      |
|                           | NATV 10  | 65         | NATV 10 PP    | 65         | 10                          | 30 | 15 | 14 | 23 | 10 900                                    | 17 000         | 7 600  | 11 800 | 4 500                       |
| 32                        | NATR 12  | 71         | NATR 12 PP    | 71         | 12                          | 32 | 15 | 14 | 25 | 6 600                                     | 9 800          | 4 660  | 7 000  | 9 000                       |
|                           | NATV 12  | 72         | NATV 12 PP    | 72         | 12                          | 32 | 15 | 14 | 25 | 11 800                                    | 19 000         | 7 800  | 13 000 | 3 900                       |
| 35                        | NATR 15  | 103        | NATR 15 PP    | 103        | 15                          | 35 | 19 | 18 | 27 | 10 500                                    | 17 500         | 7 800  | 11 500 | 7 000                       |
|                           | NATV 15  | 105        | NATV 15 PP    | 105        | 15                          | 35 | 19 | 18 | 27 | 16 000                                    | 32 500         | 10 200 | 20 500 | 3 400                       |
| 40                        | NATR 17  | 144        | NATR 17 PP    | 144        | 17                          | 40 | 21 | 20 | 32 | 11 800                                    | 19 400         | 9 500  | 13 500 | 6 000                       |
|                           | NATV 17  | 152        | NATV 17 PP    | 152        | 17                          | 40 | 21 | 20 | 32 | 19 600                                    | 37 000         | 1 200  | 23 000 | 2 900                       |
| 47                        | NATR 20  | 246        | NATR 20 PP    | 246        | 20                          | 47 | 25 | 24 | 37 | 17 500                                    | 29 800         | 13 500 | 22 500 | 4 900                       |
|                           | NATV 20  | 254        | NATV 20 PP    | 254        | 20                          | 47 | 25 | 24 | 37 | 25 800                                    | 57 000         | 19 000 | 39 500 | 2 600                       |
| 52                        | NATR 25  | 275        | NATR 25 PP    | 275        | 25                          | 52 | 25 | 24 | 42 | 19 500                                    | 36 500         | 13 400 | 23 500 | 3 600                       |
|                           | NATV 25  | 285        | NATV 25 PP    | 285        | 25                          | 52 | 25 | 24 | 42 | 29 000                                    | 69 600         | 19 800 | 40 900 | 2 100                       |
| 62                        | NATR 30  | 470        | NATR 30 PP    | 470        | 30                          | 62 | 29 | 28 | 51 | 31 000                                    | 57 500         | 20 900 | 35 500 | 2 600                       |
|                           | NATV 30  | 481        | NATV 30 PP    | 481        | 30                          | 62 | 29 | 28 | 51 | 45 500                                    | 104 000        | 27 800 | 60 900 | 1 700                       |
| 72                        | NATR 35  | 635        | NATR 35 PP    | 635        | 35                          | 72 | 29 | 28 | 58 | 34 500                                    | 67 500         | 22 500 | 41 000 | 2 000                       |
|                           | NATV 35  | 647        | NATV 35 PP    | 647        | 35                          | 72 | 29 | 28 | 58 | 50 800                                    | 109 500        | 30 900 | 70 800 | 1 400                       |
| 80                        | NATR 40  | 805        | NATR 40 PP    | 805        | 40                          | 80 | 32 | 30 | 66 | 47 000                                    | 91 500         | 30 900 | 56 500 | 1 700                       |
|                           | NATV 40  | 890        | NATV 40 PP    | 890        | 40                          | 80 | 32 | 30 | 66 | 64 000                                    | 139 000        | 39 800 | 87 800 | 1 300                       |
| 85                        | NATR 45  | 910        | NATR 45 PP    | 910        | 45                          | 85 | 32 | 30 | 72 | 49 100                                    | 98 000         | 30 600 | 56 900 | 1 500                       |
| 90                        | NATR 50  | 960        | NATR 50 PP    | 960        | 50                          | 90 | 32 | 30 | 76 | 50 500                                    | 10 600         | 30 600 | 57 500 | 1 300                       |
|                           | NATV 50  | 990        | NATV 50 PP    | 990        | 50                          | 90 | 32 | 30 | 76 | 69 500                                    | 187 000        | 38 700 | 90 900 | 1 000                       |

1) 后缀“X”表示为圆柱形外表面，例如：NATR 5 X 或NATR 5 PP X。

2) 当轴承外圈（有外圆柱表面）装入具有一般配合的座孔中时，使用基本额定负荷 Cr 和 Cor；当用作支承滚轮时，使用额定负荷 Cw 和 Cow。

3) 使用油润滑时，极限转速增加约30%。

\*密封型的极限转速应减低30%。

1)The suffix X indicates a cylindrical outside surface e.g. NATR 5X or NATR 5 PPX.

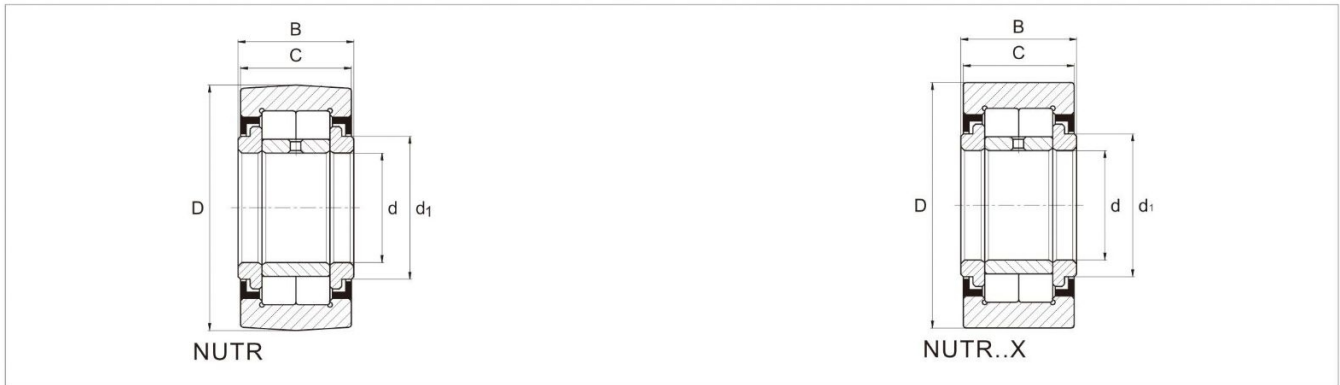
2)The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller the load ratings Cw and Cow apply.

3)Limiting speed for grease lubrication. With oil lubrication, the speed can be increased by approximately 30% except for the sealed executions.

\*for the sealed version the limiting speed n<sub>g</sub> for grease lubrication should be reduced by approximately 30%

## ■ 支承滚轮

## Yoke type track rollers



| 外径<br>Outside<br>Diameter | 轴承型号与近似重量 <sup>注1</sup><br>Bearing Designation and mass approx |            | 外形尺寸<br>Boundary Dimensions |     |    |    |    | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |         | 极限转速<br>Limiting<br>Speed   |
|---------------------------|--|------------|-----------------------------|-----|----|----|----|---|----------------|--------|---------|-----------------------------|
|                           | 有内圈<br>With IR   | 重量<br>Mass | d                           | D   | B  | C  | d1 | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为支承滚轮 |         | 脂润滑 <sup>注3</sup><br>Grease |
|                           |  |            |                             |     |    |    |    |   |                | 动Cw    | 静Cow    |                             |
| mm                        |  | g          | mm                          |     |    |    |    | N   |                |        |         | rpm                         |
| 35                        | NUTR 15  | 99         | 15                          | 35  | 19 | 18 | 20 | 20 500                                    | 24 500         | 13 900 | 15 300  | 6 500                       |
| 40                        | NUTR 17  | 147        | 17                          | 40  | 21 | 20 | 22 | 21 800                                    | 28 500         | 16 500 | 20 500  | 5 500                       |
| 42                        | NUTR 15 42   | 158        | 15                          | 42  | 19 | 18 | 20 | 20 500                                    | 24 500         | 16 800 | 21 800  | 6 500                       |
| 47                        | NUTR 17 47   | 220        | 17                          | 47  | 21 | 20 | 22 | 21 800                                    | 28 500         | 19 000 | 25 000  | 5 500                       |
|                           | NUTR 20  | 245        | 20                          | 47  | 25 | 24 | 27 | 36 900                                    | 48 900         | 26 000 | 33 500  | 4 200                       |
| 52                        | NUTR 20 52   | 321        | 20                          | 52  | 25 | 24 | 27 | 36 900                                    | 48 900         | 29 800 | 39 800  | 4 200                       |
|                           | NUTR 5   | 281        | 25                          | 52  | 25 | 24 | 31 | 40 800                                    | 58 500         | 27 500 | 35 000  | 3 400                       |
| 62                        | NUTR 25 62   | 450        | 25                          | 62  | 25 | 24 | 31 | 40 800                                    | 58 500         | 32 500 | 47 800  | 3 400                       |
|                           | NUTR 30  | 465        | 30                          | 62  | 29 | 28 | 38 | 56 800                                    | 77 500         | 39 500 | 49 500  | 2 600                       |
| 72                        | NUTR 30 72   | 697        | 30                          | 72  | 29 | 28 | 38 | 56 800                                    | 77 500         | 46 000 | 62 800  | 2 600                       |
|                           | NUTR 35  | 630        | 35                          | 72  | 29 | 28 | 44 | 63 000                                    | 91 000         | 42 500 | 59 000  | 2 100                       |
| 80                        | NUTR 35 80   | 836        | 35                          | 80  | 29 | 28 | 44 | 63 000                                    | 91 000         | 49 500 | 70 500  | 2 100                       |
|                           | NUTR 40  | 816        | 40                          | 80  | 32 | 30 | 51 | 87 900                                    | 108 000        | 54 000 | 73 600  | 1 600                       |
| 85                        | NUTR 45  | 883        | 45                          | 85  | 32 | 30 | 55 | 93 600                                    | 119 000        | 54 000 | 77 500  | 1 400                       |
| 90                        | NUTR 40 90   | 1 129      | 40                          | 90  | 32 | 30 | 51 | 87 900                                    | 108 000        | 63 800 | 93 600  | 1 600                       |
|                           | NUTR 50  | 950        | 50                          | 90  | 32 | 30 | 60 | 98 900                                    | 140 000        | 55 900 | 79 000  | 1 300                       |
| 100                       | NUTR 45 100  | 1 396      | 45                          | 100 | 32 | 30 | 55 | 93 600                                    | 119 000        | 70 500 | 106 000 | 1 400                       |
| 110                       | NUTR 50 110  | 1 690      | 50                          | 110 | 32 | 30 | 60 | 98 900                                    | 140 000        | 73 600 | 118 000 | 1 300                       |

1) 后缀“X”表示为圆柱形外表面，例如：NUTR 40 X。

2) 当轴承外圈（有外圆柱表面）装入具有一般配合的座孔中时，使用基本额定负荷  $C_r$  和  $C_{or}$ ；当用作支承滚轮时，使用额定负荷  $C_w$  和  $C_{ow}$ 。

3) 使用油润滑时，极限转速增加约 30%。

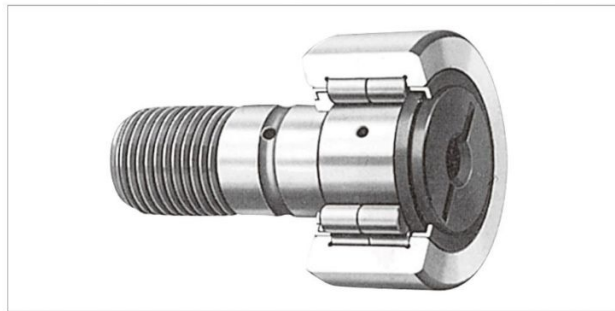
1) The suffix X indicates a cylindrical outside surface e.g. NUTR 40 X.

2) The basic load ratings  $C_r$  and  $C_{or}$  apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller the load ratings  $C_w$  and  $C_{ow}$  apply.

3) Limiting speed for grease lubrication. For oil lubrication, the speed can be increased by approximately 30%.

## ■ 曲线滚轮

## Curve rollers



曲线滚轮由一根作为滚子组内滚道的螺栓及一个厚壁外圈组成。螺栓轴的台肩及压在螺栓上的端面挡圈组成了外圈沿两个侧面方向的引导面。当曲线滚轮在平滚道或凸轮盘上运动时，由于外圈的弹性变形，滚轮的内应力加大。因此应用于此种工作情况下的额定负荷选择作为曲线滚轮一栏。

NF curve roller is composed of a stud used as the tray of a group of rollers and a thick wall outer ring. The shoulder of the stud and the surface retaining ring on the stud form the guiding faces on the two sides of the outer ring. When the curve rollers are running on the plain tray or cam wheel, the inner stress on the rollers will increase due to the deformation of the outer ring. Therefore the rated load should be selected as curve roller column in this operational case.

### 结构 Structure

|           |                     |   |
|-----------|---------------------|---|
| KR        | 由挡边及挡圈轴向引导的曲线滚轮     | Curve rollers radically guided by the retaining edge and ring                                     |
| KR...PP   | 带密封圈的曲线滚轮           | Curve rollers with sealing ring   |
| KRE       | 带偏心套的曲线滚轮           | Curve rollers with eccentric sleeve   |
| KRE...PP  | 带偏心套及密封的曲线滚轮        | Curve rollers with eccentric sleeve and retaining sleeve  |
| KRV       | 由挡边及挡圈轴向引导的曲线滚轮，满针型 | Curve rollers radically guided by the retaining edge and ring, full complement needle roller type |
| KRV...PP  | 带密封圈的曲线滚轮           | Curve rollers with sealing ring   |
| KRVE      | 带偏心套的曲线滚轮           | Curve rollers with eccentric sleeve   |
| KRVE...PP | 带偏心套及密封的曲线滚轮        | Curve rollers with eccentric sleeve and retaining sleeve  |
| NUKR      | 滚动体轴向引导的曲线滚轮，满滚子型   | Curve rollers axile guided by rolling bodies, full roller type                                    |
| NUKRE     | 带偏心套的曲线滚轮           | Curve rollers with eccentric sleeve   |

### KR及KR...PP型曲线滚轮 KR and KR...PP type curve rollers

在KR、KR...PP曲线滚轮内，滚针是有保持架引导，而外圈则经由螺栓上的挡圈轴向引导。适用于重载和中转速。由于轴承内部有较多的贮脂空间，所以润滑周期得到延长。KR...PP曲线滚轮为带接触式密封结构。使用温度-30~100℃。

In KR, KR...PP curve rollers, the rolling needles are guided by the retainer while the outer ring is guided by the retaining ring shaft on the stud. These rollers are suitable for heavy load and middle speed revolution. The lubricating can last a long period due to the bigger grease storage space inside the bearing. KR...PP curve roller is of contacting sealing structure. The operational temperature is -30 - 100℃.

### KRV及KRV...PP型曲线滚轮 KRV and KRV...PP type curve rollers

KRV、KRV...PP曲线滚轮和KR、KR...PP曲线滚轮结构相同，仅是它们是满装滚针轴承。它们可以承受较重的载荷及较低的转速。且必须经常加润滑脂。

KRV, KRV...PP curve rollers have the same structure as KR, KR...PP type but they are filled with needle bearings. They can be used to bear heavier load and run with lower speed. They should be lubricated very often.

## ■ 曲线滚轮

## Curve rollers

### NUKR曲线滚轮 NUKR type curve rollers

这种系列曲线滚轮是双列满装滚子结构。象圆柱滚子轴承一样具有外圈由滚动体作轴向引导压入外圈的罩壳和挡边台阶组成高效果的间隙密封。

这种曲线滚轮能承受特别高的负荷，还有由于受滚子的轴向引导也可承受冲击性的轴向负荷。

This series curve rollers are of double lines full-roller structure. Like all cylindrical roller bearings, they are composed of outer ring cages pressed in the rolling bodies axle guidance and the retaining edge steps which forms highly effective gap sealing.

Especially heavy load can be borne by these rollers and also they can sustain the axile load impact due to the axile guidance by the rollers.

### KRE、KRE...PP、KREV、KREV...PP、NUKRE型曲线滚轮 KRE, KRE...PP, KREV, KREV...PP, NUKRE type curve rollers

全部型号的曲线滚轮都可带偏心套供应。滚轮可以通过螺栓端面的槽进行调节。在螺栓端面标记“LH”处表示偏心套的最高点。加润滑脂可以通过螺栓两端进行。

Curve rollers of all these types can be supplied with eccentric sleeve. The rollers can be adjusted by adjusting the stud end face. The top of the eccentric sleeve is situated at the place where LH is marked. Lubricating grease can be made through the both ends of the stud.

### 公差 Tolerance

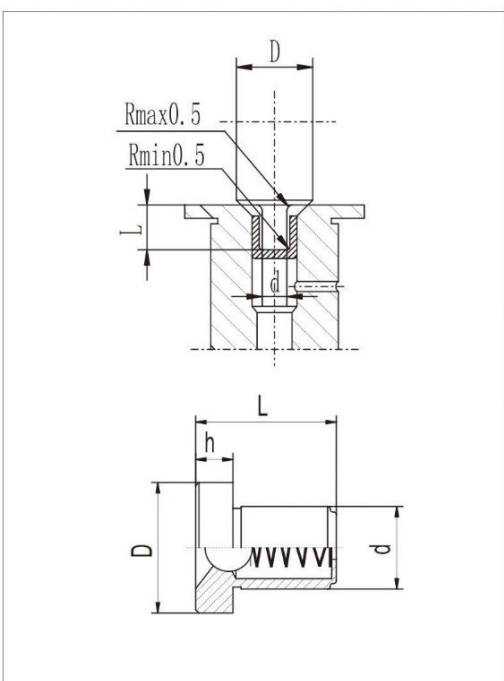
标准轴承外圈尺寸公差和旋转精度为P0级，但不适合外表面为圆弧的，其公差为0/-0.05mm。螺栓直径公差为h7。

The dimensional tolerance and rotation precision of the standard bearing out ring is P0 grade which is not applicable to the arc shaped surface with tolerance 0/-0.05mm. The diameter tolerance of the stud is h7.

### 附件 Assemblies

#### 密封塞、润滑嘴

不用的油孔必须在安装前用密封塞塞紧。密封塞应当用装配心轴压入油孔，其尺寸如下表。必要时“LH”可提供。“LH”也可提供适用于曲线滚轮的压力油嘴，其尺寸如下表。



#### Sealing plug, lubricating spout

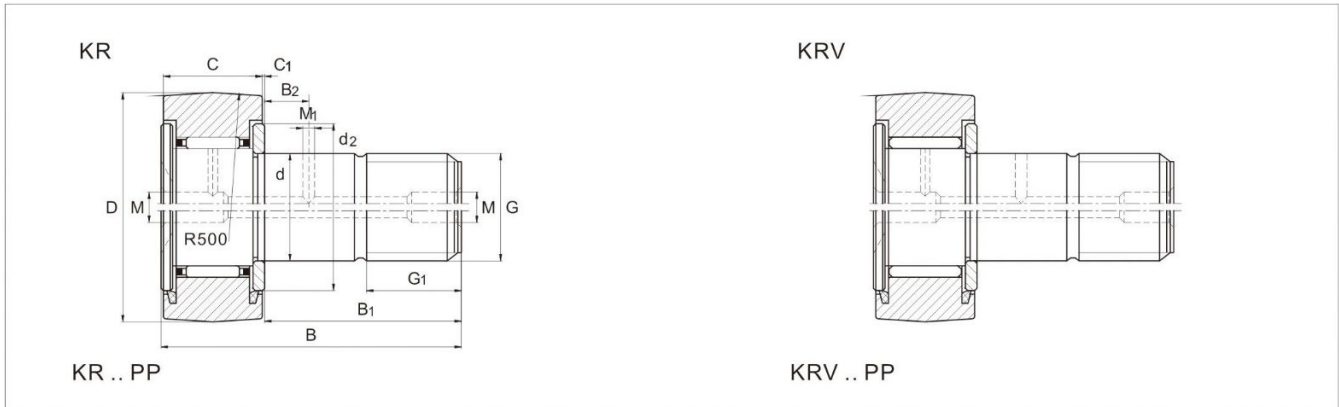
The oil holes that are not used must be plugged with sealing plugs in fitting. The sealing plugs should be pressed into the oil holes with fitting central shaft with the dimensions in the table below. LH will supply it when necessary. LH will also supply the pressure oil spouts with the dimensions listed in the following table:

| 密封塞<br>Sealing plug | 公称直径<br>Nominal diameter | 安装心轴尺寸<br>Fitting central shaft dimensions |      |      | 适用尺寸<br>Applicable size |
|---------------------|--------------------------|--|------|------|-------------------------|
|                     |                          | D  | d-01 | L-01 |                         |
| VD1                 | 4                        | 10   | 2.7  | 5.2  | 16-26                   |
| VD2                 | 6                        | 12   | 4.7  | 7.3  | 30-40                   |
| VD3                 | 8                        | 15   | 6.7  | 1.0  | 47-90                   |

| 油嘴<br>Oil spout | 尺寸 Size mm |   |    |     | 适用尺寸<br>Applicable size |
|-----------------|------------|---|----|-----|-------------------------|
|                 | D          | d | L  | h   |                         |
| NIP A1          | 6          | 4 | 6  | 1.5 | 16-26                   |
| NIP A2          | 8          | 6 | 9  | 2   | 30-40                   |
| NIP A3          | 10         | 8 | 12 | 3   | 47-90                   |

■ 曲线滚轮

Stud type track rollers



| 外径<br>Outside<br>Diameter | 轴承型号与近似重量<br>Bearing Designation and mass approx |            |                                    |            | 外形尺寸<br>Boundary Dimensions |    |    |    |                    |                |         |                |      |    |                   |                  |  |
|---------------------------|--|------------|------------------------------------|------------|-----------------------------|----|----|----|--------------------|----------------|---------|----------------|------|----|-------------------|------------------|--|
|                           | 无偏心罩壳<br>Without<br>Eccentric<br>Collar          | 重量<br>Mass | 带偏心罩壳<br>With<br>Ecctric<br>Collar | 重量<br>Mass | D                           | d  | C  | B  | B <sub>1</sub>     | B <sub>2</sub> | G       | G <sub>1</sub> | M    | M1 | C <sub>1</sub>    | d <sub>2</sub>   |  |
|                           | mm   | g          | mm                                 | g          | mm                          |    |    |    |                    |                |         |                |      |    |                   |                  |  |
| 16                        | KR 16  | 18         | KRE 16                             | 20         | 16                          | 6  | 11 | 28 | 16                 | -              | M6      | 8              | 4.5) | -  | 0.6               | 12               |  |
|                           | KR 16 PP   | 18         | KRE 16 PP                          | 20         | 16                          | 6  | 11 | 28 | 16                 | -              | M6      | 8              | 4.5) | -  | 0.6               | 12               |  |
|                           | KRV 16   | 20         | KRVE 16                            | 22         | 16                          | 6  | 11 | 28 | 16                 | -              | M6      | 8              | 4.5) | -  | 0.6               | 12               |  |
|                           | KRV 16 PP  | 20         | KRVE 16 PP                         | 22         | 16                          | 6  | 11 | 28 | 16                 | -              | M6      | 8              | 4.5) | -  | 0.6               | 12               |  |
| 19                        | KR 19  | 28         | KRE 19                             | 31.2       | 19                          | 8  | 11 | 32 | 20                 | -              | M8      | 10             | 4.5) | -  | 0.6               | 14               |  |
|                           | KR 19 PP   | 28         | KRE 19 PP                          | 31.2       | 19                          | 8  | 11 | 32 | 20                 | -              | M8      | 10             | 4.5) | -  | 0.6               | 14               |  |
|                           | KRV 19   | 32         | KRVE 19                            | 35.2       | 19                          | 8  | 11 | 32 | 20                 | -              | M8      | 10             | 4.5) | -  | 0.6               | 14               |  |
|                           | KRV 19 PP  | 32         | KRVE 19 PP                         | 35.2       | 19                          | 8  | 11 | 32 | 20                 | -              | M8      | 10             | 4.5) | -  | 0.6               | 14               |  |
| 22                        | KR 22  | 44         | KRE 22                             | 48.3       | 22                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KR 22 PP   | 44         | KRE 22 PP                          | 48.3       | 22                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KRV 22   | 45         | KRVE 22                            | 49.3       | 22                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KRV 22 PP  | 45         | KRVE 22 PP                         | 49.3       | 22                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
| 26                        | KR 26  | 58         | KRE 26                             | 62.3       | 26                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KR 26 PP   | 58         | KRE 26 PP                          | 62.3       | 26                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KRV 26   | 61         | KRVE 26                            | 65.3       | 26                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
|                           | KRV 26 PP  | 61         | KRVE 26 PP                         | 65.3       | 26                          | 10 | 12 | 36 | 23                 | -              | M10X1   | 12             | 4    | -  | 0.6               | 17               |  |
| 30                        | KR 30  | 87         | KRE 30                             | 92.5       | 30                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KR 30 PP   | 87         | KRE 30 PP                          | 92.5       | 30                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KRV 30   | 89         | KRVE 30                            | 94.5       | 30                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KRV 30 PP  | 89         | KRVE 30 PP                         | 94.5       | 30                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
| 32                        | KR 32  | 98         | KRE 32                             | 103.5      | 32                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KR 32 PP   | 98         | KRE 32 PP                          | 103.5      | 32                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KRV 32   | 100        | KRVE 32                            | 105.5      | 32                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
|                           | KRV 32 PP  | 100        | KRVE 32 PP                         | 105.5      | 32                          | 12 | 14 | 40 | 25                 | 6              | M12X1.5 | 13             | 6    | 3  | 0.6               | 23               |  |
| 35                        | KR 35  | 169        | KRE 35                             | 181.5      | 35                          | 16 | 18 | 52 | 32.5               | 8              | M16X1.5 | 17             | 6    | 3  | 0.8               | 27               |  |
|                           | KR 35 PP   | 169        | KRE 35 PP                          | 181.5      | 35                          | 16 | 18 | 52 | 32.5               | 8              | M16X1.5 | 17             | 6    | 3  | 0.8               | 27               |  |
|                           | KRV 35   | 171        | KRVE 35                            | 183.5      | 35                          | 16 | 18 | 52 | 32.5               | 8              | M16X1.5 | 17             | 6    | 3  | 0.8               | 27               |  |
|                           | KRV 35 PP  | 171        | KRVE 35 PP                         | 183.5      | 35                          | 16 | 18 | 52 | 32.5               | 8              | M16X1.5 | 17             | 6    | 3  | 0.8               | 27               |  |
|                           | NUKR 35  | 164        | NUKRE 35                           | 176.5      | 35                          | 16 | 18 | 52 | 32.5 <sup>4)</sup> | 8              | M16X1.5 | 17             | 6    | 3  | 0.8 <sup>4)</sup> | 21 <sup>4)</sup> |  |

1) 后缀“X”表示为圆柱形外表面，例如：KR 16 X。

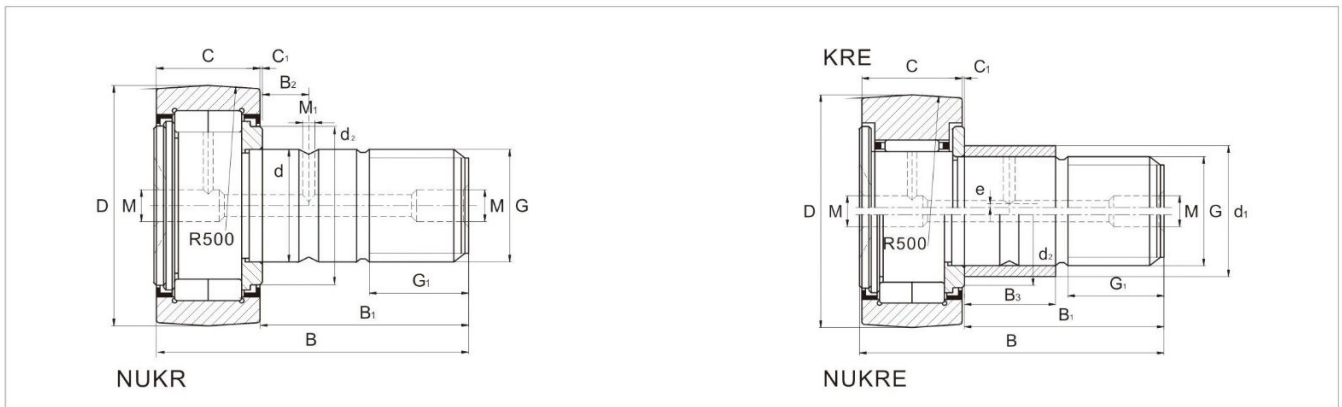
2) 当轴承外圈(有外圆柱表面)装入具有一般配合的座孔中时，使用基本额定负荷C<sub>r</sub>和C<sub>0r</sub>；当用作支承滚轮时，使用额定负荷C<sub>w</sub>和C<sub>0w</sub>。

1) The suffix X indicates a cylindrical outside surface e.g. KR 16 X.

2) The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller, the load ratings C<sub>w</sub> and C<sub>0w</sub> apply.

■ 曲线滚轮

Stud type track rollers



| 外形尺寸<br>Boundary Dimensions             |                |     | 螺母拧紧力矩<br>Nut Tightening Torque<br>MA | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |        |         |          | 极限转速<br>Limiting Speed      |
|---|----------------|-----|---------------------------------------|---|----------------|--------|--------|---------|----------|-----------------------------|
| 偏心套<br>d <sub>1</sub><br>h <sub>9</sub> | B <sub>3</sub> | e   |                                       | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为曲线滚轮 |        | 径向负荷极限  |          | 脂润滑 <sup>注3</sup><br>Grease |
| mm                                      |                |     | Nm                                    | N   |                | N      |        | N       |          | rpm                         |
|   |                |     |                                       |   |                | 动Cw    | 静Cow   | Fr perm | For perm |                             |
| 9                                       | 7              | 0.5 | 2.5                                   | 3 650                                     | 3 540          | 3 020  | 3 100  | -       | -        | 18 000                      |
| 9                                       | 7              | 0.5 | 2.5                                   | 3 650                                     | 3 540          | 3 020  | 3 100  | -       | -        | 12 000                      |
| 9                                       | 7              | 0.5 | 2.5                                   | 6 000                                     | 8 000          | 4 610  | 6 000  | -       | -        | 7 200                       |
| 9                                       | 7              | 0.5 | 2.5                                   | 6 000                                     | 8 000          | 4 610  | 6 000  | -       | -        | 7 200                       |
| 11                                      | 9              | 0.5 | 6.8                                   | 3 820                                     | 4 160          | 3 220  | 3 100  | -       | -        | 16 000                      |
| 11                                      | 9              | 0.5 | 6.8                                   | 3 820                                     | 4 160          | 3 220  | 3 100  | -       | -        | 11 300                      |
| 11                                      | 9              | 0.5 | 6.8                                   | 6 300                                     | 9 800          | 5 000  | 6 900  | -       | -        | 6 000                       |
| 11                                      | 9              | 0.5 | 6.8                                   | 6 300                                     | 9 800          | 5 000  | 6 900  | -       | -        | 6 000                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 4 770                                     | 5 010          | 3 450  | 4 020  | -       | -        | 10 000                      |
| 13                                      | 10             | 0.5 | 12.5                                  | 4 770                                     | 5 010          | 3 450  | 4 020  | -       | -        | 9 000                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 6 200                                     | 9 900          | 5 300  | 7 100  | -       | -        | 4 500                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 6 200                                     | 9 900          | 5 300  | 7 100  | -       | -        | 4 500                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 4 100                                     | 5 500          | 4 100  | 5 200  | -       | -        | 10 000                      |
| 13                                      | 10             | 0.5 | 12.5                                  | 4 100                                     | 5 500          | 4 100  | 5 200  | -       | -        | 9 100                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 6 600                                     | 9 900          | 5 320  | 8 900  | -       | -        | 4 300                       |
| 13                                      | 10             | 0.5 | 12.5                                  | 6 600                                     | 9 900          | 5 320  | 8 900  | -       | -        | 4 300                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 6 140                                     | 7 700          | 5 820  | 6 400  | -       | -        | 9 000                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 6 140                                     | 7 700          | 5 820  | 6 400  | -       | -        | 6 300                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 9 200                                     | 10 100         | 7 500  | 10 600 | -       | -        | 3 200                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 9 200                                     | 10 100         | 7 500  | 10 600 | -       | -        | 3 200                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 6 100                                     | 8 700          | 5 100  | 7 001  | -       | -        | 9 000                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 6 100                                     | 8 700          | 5 100  | 7 001  | -       | -        | 6 300                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 8 220                                     | 12 600         | 8 000  | 11 800 | -       | -        | 3 220                       |
| 15                                      | 11             | 0.5 | 18.2                                  | 8 220                                     | 12 600         | 8 000  | 11 800 | -       | -        | 3 220                       |
| 20                                      | 14             | 1   | 45.8                                  | 9 900                                     | 15 000         | 7 900  | 10 100 | -       | -        | 5 800                       |
| 20                                      | 14             | 1   | 45.8                                  | 9 900                                     | 15 000         | 7 900  | 10 100 | -       | -        | 5 800                       |
| 20                                      | 14             | 1   | 45.8                                  | 10 300                                    | 24 000         | 9 800  | 16 000 | -       | -        | 2 800                       |
| 20                                      | 14             | 1   | 45.8                                  | 10 300                                    | 24 000         | 9 800  | 16 000 | -       | -        | 2 800                       |
| 20                                      | 14             | 1   | 45.8                                  | 15 100                                    | 19 980         | 10 120 | 16 300 | 8300    | 16400    | 4 230                       |

3) 油润滑的极限转速增加约 30%，密封情况例外。

4) 油孔仅在螺栓挡边端端面上。

3) Limiting speed for grease lubrication.

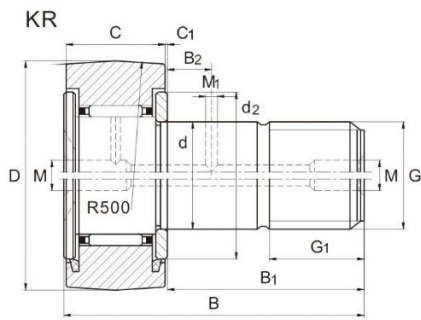
For oil lubrication, the speed can be increased by approximately 30% except for sealed executions.

4) Lubrication hole is in the end face at the ribbed end of the stud only.

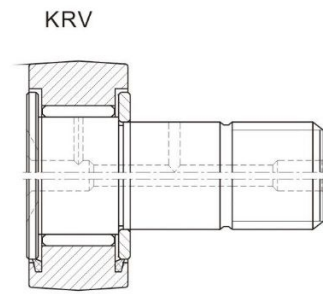


## ■ 曲线滚轮

## Stud type track rollers



KR .. PP (外圈为圆柱形表面应带后缀“X”, 注1)



KRV .. PP

| 外径<br>OD | 轴承型号与近似重量 <sup>注1</sup><br>Bearing Designation and mass approx |            |                                      |            | 外形尺寸<br>Boundary Dimensions |    |    |     |                |                |         |                |   |                |                |                |
|----------|--|------------|--------------------------------------|------------|-----------------------------|----|----|-----|----------------|----------------|---------|----------------|---|----------------|----------------|----------------|
|          | 无偏心罩壳<br>Without<br>Eccentric<br>Collar                        | 重量<br>Mass | 带偏心罩壳<br>With<br>Eccentric<br>Collar | 重量<br>Mass | D                           | d  | C  | B   | B <sub>1</sub> | B <sub>2</sub> | G       | G <sub>1</sub> | M | M <sub>1</sub> | C <sub>1</sub> | d <sub>2</sub> |
|          | mm   | g          | mm                                   | g          | mm                          |    |    |     |                |                |         |                |   |                |                |                |
| 40       | KR 40  | 247        | KRE 40                               | 262.8      | 40                          | 18 | 20 | 58  | 36.5           | 8              | M18X1.5 | 19             | 6 | 3              | 0.8            | 32             |
|          | KR 40 PP   | 247        | KRE 40 PP                            | 262.8      | 40                          | 18 | 20 | 58  | 36.5           | 8              | M18X1.5 | 19             | 6 | 3              | 0.8            | 32             |
|          | KRV 40   | 249        | KRVE 40                              | 264.8      | 40                          | 18 | 20 | 58  | 36.5           | 8              | M18X1.5 | 19             | 6 | 3              | 0.8            | 32             |
|          | KRV 40 PP  | 249        | KRVE 40 PP                           | 264.8      | 40                          | 18 | 20 | 58  | 36.5           | 8              | M18X1.5 | 19             | 6 | 3              | 0.8            | 32             |
|          | NUKR 40  | 242        | NUKRE 40                             | 257.8      | 40                          | 18 | 20 | 58  | 36.5           | 8              | M18X1.5 | 19             | 6 | 3              | 0.8            | 23             |
| 47       | KR 47  | 386        | KRE 47                               | 405.5      | 47                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KR 47 PP   | 386        | KRE 47 PP                            | 405.5      | 47                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KRV 47   | 390        | KRVE 47                              | 409.5      | 47                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KRV 47 PP  | 390        | KRVE 47 PP                           | 409.5      | 47                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | NUKR 47  | 380        | NUKRE 47                             | 399.5      | 47                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 27             |
| 52       | KR 52  | 461        | KRE 52                               | 480.5      | 52                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KR 52 PP   | 461        | KRE 52 PP                            | 480.5      | 52                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KRV 52   | 465        | KRVE 52                              | 484.5      | 52                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | KRV 52 PP  | 465        | KRVE 52 PP                           | 484.5      | 52                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 37             |
|          | NUKR 52  | 450        | NUKRE 52                             | 469.5      | 52                          | 20 | 24 | 66  | 40.5           | 9              | M20X1.5 | 21             | 8 | 4              | 0.8            | 31             |
| 62       | KR 62  | 790        | KRE 62                               | 818.2      | 62                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KR 62 PP   | 790        | KRE 62 PP                            | 818.2      | 62                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KRV 62   | 802        | KRVE 62                              | 830.2      | 62                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KRV 62 PP  | 802        | KRVE 62 PP                           | 830.2      | 62                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | NUKR 62  | 795        | NUKRE 62                             | 823.5      | 62                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 38             |
| 72       | KR 72  | 1 040      | KRE 72                               | 1 068.2    | 72                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KR 72 PP   | 1 040      | KRE 72 PP                            | 1 068.2    | 72                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KRV 72   | 1 045      | KRVE 72                              | 1 073.2    | 72                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | KRV 72 PP  | 1 045      | KRVE 72 PP                           | 1 073.2    | 72                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
|          | NUKR 72  | 1 200      | NUKRE 72                             | 1 038.2    | 72                          | 24 | 29 | 80  | 49.5           | 11             | M24X1.5 | 25             | 8 | 4              | 0.8            | 44             |
| 80       | KR 80  | 1 550      | KRE 80                               | 1 610      | 80                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KR 80 PP   | 1 550      | KRE 80 PP                            | 1 610      | 80                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KRV 80   | 1 561      | KRVE 80                              | 1 621      | 80                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KRV 80 PP  | 1 561      | KRVE 80 PP                           | 1 621      | 80                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | NUKR 80  | 1 800      | NUKRE 80                             | 1 600      | 80                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 47             |
| 85       | KR 85  | 1 740      | KRE 85                               | 1 800      | 85                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KR 85 PP   | 1 740      | KRE 85 PP                            | 1 800      | 85                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
| 90       | KR 90  | 1 950      | KRE 90                               | 2 010      | 90                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KR 90 PP   | 1 950      | KRE 90 PP                            | 2 010      | 90                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KRV 90   | 1 970      | KRVE 90                              | 2 030      | 90                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | KRV 90 PP  | 1 970      | KRVE 90 PP                           | 2 030      | 90                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 53             |
|          | NUKR 90  | 2 300      | NUKRE 90                             | 2 020      | 90                          | 30 | 35 | 100 | 63             | 15             | M30X1.5 | 32             | 8 | 4              | 1              | 47             |

1) 后缀“X”表示为圆柱形外表面, 例如: KR 16 X。

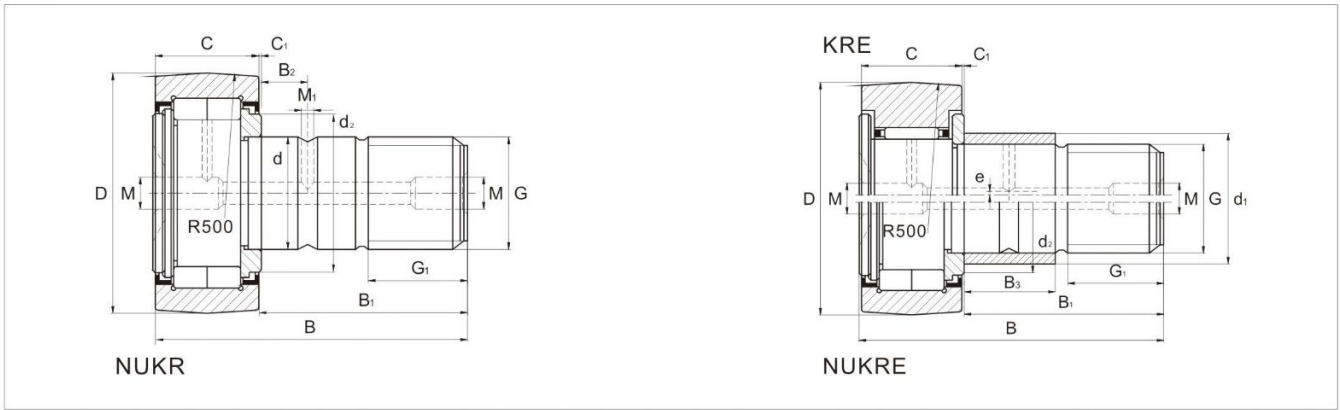
2) 当轴承外圈(有外圆柱表面)装入具有一般配合的座孔中时, 使用基本额定负荷 Cr 和 Cor; 当用作支承滚轮时, 使用额定负荷 Cw 和 Cow。

1) The suffix X indicates a cylindrical outside surface e.g. KR 16 X.

2) The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted in a housing bore with the normal rolling bearing fit; when used as a track roller, the load ratings C<sub>w</sub> and C<sub>ow</sub> apply.

■ 曲线滚轮

Stud type track rollers



| 外形尺寸<br>Boundary Dimensions |    |     | 螺母拧紧力矩<br>Nut Tightening Torque<br>MA | 基本额定负荷 <sup>注2</sup><br>Basic Load Rating |                |        |         |         |          | 极限转速<br>Limiting Speed |
|-----------------------------|----|-----|---------------------------------------|---|----------------|--------|---------|---------|----------|------------------------|
| 偏心套<br>d1<br>h9             | B3 | e   |                                       | 动Cr<br>Dynamic                            | 静Cor<br>Static | 作为曲线滚轮 |         | 径向负荷极限  |          | 脂润滑<br>Grease          |
| mm                          |    |     | Nm                                    | N   |                | N      |         | N       |          | rpm                    |
|                             |    |     |                                       |   |                | 动Cw    | 静Cow    | Fr perm | For perm |                        |
| 22                          | 16 | 1   | 68.7                                  | 9 290                                     | 11 400         | 8 100  | 11 500  | -       | -        | 4 200                  |
| 22                          | 16 | 1   | 68.7                                  | 9 290                                     | 11 400         | 8 100  | 11 500  | -       | -        | 4 200                  |
| 22                          | 16 | 1   | 68.7                                  | 11 200                                    | 23 500         | 10 800 | 18 500  | -       | -        | 2 100                  |
| 22                          | 16 | 1   | 68.7                                  | 11 200                                    | 23 500         | 10 800 | 18 500  | -       | -        | 2 100                  |
| 22                          | 16 | 1   | 68.7                                  | 13 800                                    | 18 000         | 12 500 | 18 800  | 13200   | 22800    | 4 210                  |
| 24                          | 18 | 1   | 101                                   | 12 500                                    | 22 000         | 10 500 | 20 500  | -       | -        | 3 900                  |
| 24                          | 18 | 1   | 101                                   | 12 500                                    | 22 000         | 10 500 | 20 500  | -       | -        | 3 900                  |
| 24                          | 18 | 1   | 101                                   | 16 000                                    | 41 000         | 16 600 | 32 000  | -       | -        | 1 800                  |
| 24                          | 18 | 1   | 101                                   | 16 000                                    | 41 000         | 16 600 | 32 000  | -       | -        | 1 800                  |
| 24                          | 18 | 1   | 101                                   | 30 200                                    | 40 000         | 18 900 | 28 500  | 10500   | 30000    | 3 200                  |
| 24                          | 18 | 1   | 101                                   | 10 500                                    | 21 000         | 10 800 | 22 500  | -       | -        | 3 990                  |
| 24                          | 18 | 1   | 101                                   | 10 500                                    | 21 000         | 10 800 | 22 500  | -       | -        | 3 990                  |
| 24                          | 18 | 1   | 101                                   | 22 000                                    | 39 000         | 10 500 | 32 100  | -       | -        | 1 800                  |
| 24                          | 18 | 1   | 101                                   | 22 000                                    | 39 000         | 10 500 | 38 100  | -       | -        | 1 800                  |
| 24                          | 18 | 1   | 101                                   | 37 500                                    | 49 300         | 15 001 | 22 503  | 10400   | 30500    | 1 990                  |
| 28                          | 22 | 1   | 205                                   | 20 500                                    | 33 000         | 16 500 | 31 500  | -       | -        | 2 100                  |
| 28                          | 22 | 1   | 205                                   | 20 500                                    | 33 000         | 16 500 | 31 500  | -       | -        | 2 100                  |
| 28                          | 22 | 1   | 205                                   | 31 700                                    | 61 000         | 29 600 | 56 000  | -       | -        | 1 300                  |
| 28                          | 22 | 1   | 205                                   | 31 700                                    | 61 000         | 29 600 | 56 000  | -       | -        | 1 300                  |
| 28                          | 22 | 1   | 205                                   | 41 000                                    | 59 300         | 40 500 | 51 000  | 18800   | 39500    | 1 300                  |
| 28                          | 22 | 1   | 205                                   | 41 500                                    | 50 300         | 25 000 | 50 890  | -       | -        | 2 800                  |
| 28                          | 22 | 1   | 205                                   | 20 500                                    | 50 000         | 25 000 | 50 890  | -       | -        | 2 800                  |
| 28                          | 22 | 1   | 205                                   | 31 500                                    | 71 000         | 27 000 | 75 000  | -       | -        | 1 200                  |
| 28                          | 22 | 1   | 205                                   | 31 500                                    | 71 000         | 27 000 | 75 000  | -       | -        | 1 200                  |
| 28                          | 22 | 1   | 205                                   | 45 000                                    | 63 000         | 35 000 | 41 000  | 23500   | 51000    | 1 020                  |
| 35                          | 29 | 1.5 | 351                                   | 40 800                                    | 75 300         | 24 500 | 57 000  | -       | -        | 2 030                  |
| 35                          | 29 | 1.5 | 351                                   | 40 800                                    | 75 300         | 24 500 | 57 000  | -       | -        | 2 030                  |
| 35                          | 29 | 1.5 | 351                                   | 46 000                                    | 102 000        | 39 900 | 100 600 | -       | -        | 1 000                  |
| 35                          | 29 | 1.5 | 351                                   | 46 000                                    | 102 000        | 39 900 | 100 600 | -       | -        | 1 000                  |
| 35                          | 29 | 1.5 | 351                                   | 75 000                                    | 103 600        | 50 200 | 71 000  | 34900   | 72000    | 1 200                  |
| 35                          | 29 | 1.5 | 351                                   | 38 700                                    | 64 300         | 29 900 | 69 000  | -       | -        | 1 840                  |
| 35                          | 29 | 1.5 | 351                                   | 38 700                                    | 64 300         | 29 900 | 69 000  | -       | -        | 1 840                  |
| 35                          | 29 | 1.5 | 351                                   | 38 700                                    | 64 300         | 29 900 | 69 000  | -       | -        | 1 840                  |
| 35                          | 29 | 1.5 | 351                                   | 38 700                                    | 64 300         | 29 900 | 69 000  | -       | -        | 1 840                  |
| 35                          | 29 | 1.5 | 351                                   | 48 970                                    | 102 300        | 38 800 | 100 000 | -       | -        | 1 600                  |
| 35                          | 29 | 1.5 | 351                                   | 48 970                                    | 102 300        | 38 800 | 100 000 | -       | -        | 1 600                  |
| 35                          | 29 | 1.5 | 351                                   | 75 000                                    | 103 300        | 51 400 | 93 000  | 58000   | 97000    | 1 500                  |

3) 油润滑的极限转速增加约30%，密封情况例外。

4) 油孔仅在螺栓档边端端面上。

3) Limiting speed for grease lubrication.

For oil lubrication, the speed can be increased by approximately 30% except for sealed executions.

4) Lubrication hole is in the end face at the ribbed end of the stud only.