



# **DISTITEC<sup>®</sup>**

CATALOGUE FOR ROLLER BEARINGS AND TRACK ROLLERS



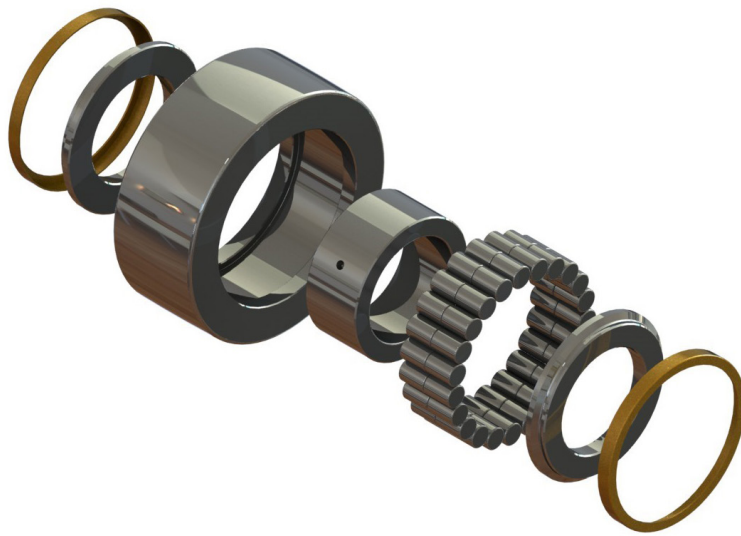
This catalogue provides an overview of the products made – partly in outsourcing – by **DISTITEC S.R.L.** and employed in the steel and mechanical industry.

Bearings described in this catalogue are mainly used in flattening and straightening lines of steel sheet, stainless steel sheet and aluminum sheet, but also in rolling mills on the rolling cylinder necks, in overhead conveyors and in many applications of the mechanical industry such as LIFTING VEHICLES, NAVAL CRANES, PALLETIZERS, SOLAR PANELS, WIND TURBINES, WOOD PROCESSING MACHINES, RADARS, BOTTLING MACHINES, REVOLVING LIFTING CLAMPS, WELDING ROBOTS, REVOLVING TABLES and OTHERS.

**DISTITEC** relies on qualified and certified technicians with a long experience in this field and equipped with advanced machine tools to produce high precision mechanical parts.

**DISTITEC** performs the design, assembling and testing of its products and provides an efficient technical assistance to the customer. After sizing the bearings and executing the construction drawings we follow the order progress: the components are worked, checked, tested and assembled. Finally, we execute the final testing. If the assembled bearing is in accordance with the technical requests and the roller bearing standards, it is ready to be packed and shipped. Our stock can meet customers' requests with a short delivery time.

|                                                                                 |           |
|---------------------------------------------------------------------------------|-----------|
| Technical Specifications for support rollers and NNTR Series.....               | <b>5</b>  |
| RSTO – STO Series.....                                                          | <b>6</b>  |
| RNA 22 - NA 22 Series.....                                                      | <b>7</b>  |
| NATR – NATV Series.....                                                         | <b>8</b>  |
| NUTR – PWTR Series.....                                                         | <b>9</b>  |
| NNTR Series.....                                                                | <b>11</b> |
| Support rollers and wheels' possibility of assembly.....                        | <b>12</b> |
| KR – KRE – KRV Series.....                                                      | <b>13</b> |
| NUKR – NUKRE – PWKR – PWKRE Series.....                                         | <b>15</b> |
| Technical specifications For full complement cylindrical roller bearings.....   | <b>17</b> |
| SL18 22... SL18 23... SL18 29... SL18 30... Series.....                         | <b>18</b> |
| SL18 50... SL01 48... SL01 49... SL02 48... SL02 49... Series.....              | <b>23</b> |
| SL 04 Series.....                                                               | <b>27</b> |
| Technical specifications for axial bearings.....                                | <b>28</b> |
| 811, 812, 893, 894 Series.....                                                  | <b>29</b> |
| Tolerances and clearances of cylindrical roller wheels and support rollers..... | <b>34</b> |
| Tolerances of cylindrical roller axial bearings and dimensional symbols.....    | <b>35</b> |
| Calculations and technical information.....                                     | <b>36</b> |



- 1 – Outer ring
- 2 – Pin
- 3 – Inner ring
- 4 – Washers
- 5 – Rollers
- 6 – Protections
- 7 – Eccentric bushings
- 8 – Low nuts

Image: NUTR 3072

Support rollers that Distitec produces have the following technical characteristics:

**Outer ring** made of case-hardening steel 16MnCr5 and 16CrNi4 (UNI 7846) for the small support rollers and in 18NiCrMo5 and 20CrMnTi (UNI 7846) for the large ones. These steels, in addition to having excellent mechanical characteristics and the possibility of reaching high hardness, after treatment have good capacity to withstand shocks. They are in fact used for those bearings that work like rollers, that is with the outer rings free and not housed in special seats as in traditional applications where bearings belonging to the standard types are used.

The surface hardness they can reach is 60-2 HRc. The depth of the “hard” area varies from 0.8/1 mm and increases with the size of the bearing and therefore the loads to be supported.

**Inner ring, washers and rollers** made of 100Cr6 (UNI 3097) hardened steel, steel with the best characteristics of resistance to wear with a hardness of up to 60 + 2 HRc.

**Pin** made of C45 and 42CrMo4 (UNI 7845) steel with induction hardened roller (or ball) sliding tracks with a hardness of 60 + 2 HRc and a depth that increases with increasing size.

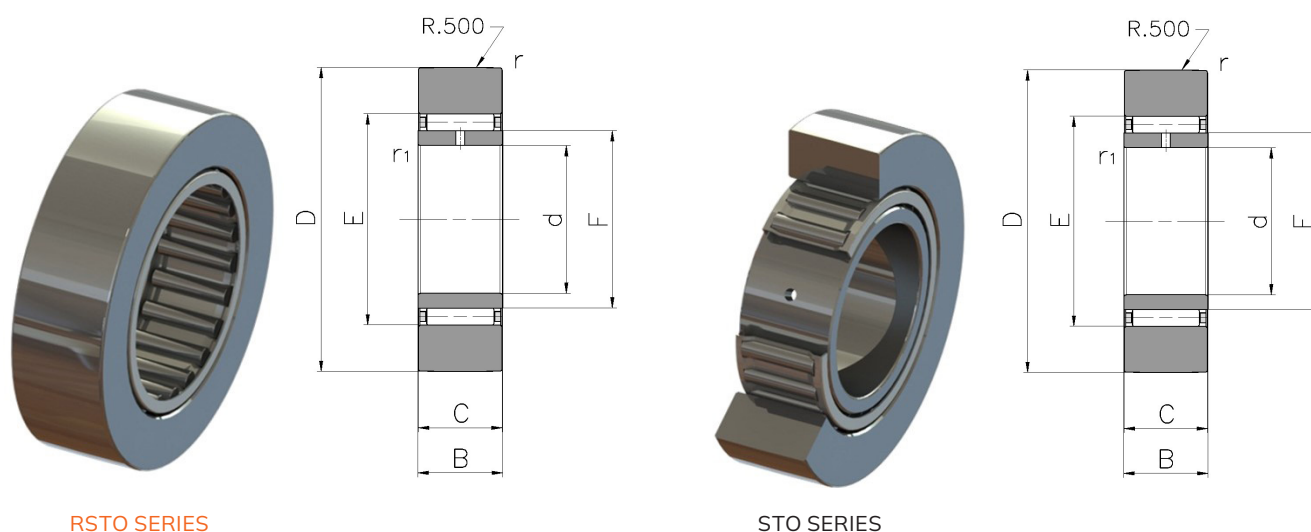
**Protections** in steel sheet subjected to antioxidant treatment and seals in steel sheet with antioxidant treatment and part in NBR nitrile rubber and on request in FKM material for high temperatures and for applications with the presence of aggressive chemicals.

**Eccentric bushings** made of C45 steel (UNI 7845).

On request, low nuts are supplied for the support rollers with pin. The accuracy class of this type is P0 according to DIN 620.



Image: NUKRE 72


**RSTO SERIES**
**STO SERIES**

These types of support rollers have a thick outer ring necessary to guarantee the mechanical resistance suitable for limiting to a minimum the deformations under load.

The rounded external profile allows to compensate for possible mismatches present in the parts surrounding the bearing, to reduce the hertzian contact pressure and so less usury and longer duration of the track.

Rollers are held in a radial cage made with a stamped sheet metal that allows the bearing to reach high operating speeds.

These bearings don't allow the use in applications in which are present axial loads but they allow small axial displacements of the outer ring.

They can be internally protected by adding sealing lips, not creeping seals and labyrinth seals.

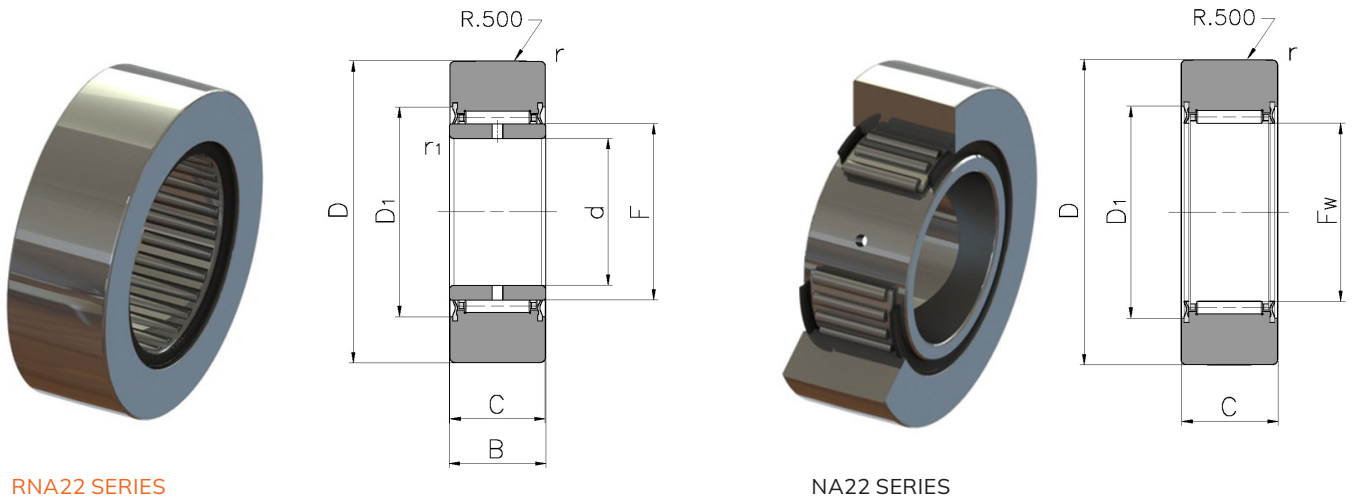
| External diameter<br>D | CODE<br>Without<br>inner ring | Weight<br>g | CODE<br>With<br>inner ring | Weight<br>g | Dimensions (mm) |    |      |    |                 |                |                | Basic load ratings           |                                | Fatigue load limit<br>P <sub>UW</sub><br>KN | Number of spins <sup>2)</sup><br>n <sub>D</sub> Grease<br>min <sup>-1</sup> |
|------------------------|-------------------------------|-------------|----------------------------|-------------|-----------------|----|------|----|-----------------|----------------|----------------|------------------------------|--------------------------------|---------------------------------------------|-----------------------------------------------------------------------------|
|                        |                               |             |                            |             | d               | D  | C    | B  | F <sup>1)</sup> | d <sub>1</sub> | r <sub>s</sub> | dyn.<br>C <sub>w</sub><br>KN | stat.<br>C <sub>ow</sub><br>KN |                                             |                                                                             |
|                        |                               |             |                            |             |                 |    |      |    | F <sub>w</sub>  |                | min            |                              |                                |                                             |                                                                             |
| 16                     | RSTO 5 TN                     | 8,5         | -                          | -           | -               | 16 | 7,8  | -  | 7               | 10             | 0,3            | 2,55                         | 2,55                           | 0,31                                        | 16.000                                                                      |
| 19                     | RSTO 6 TN                     | 12,5        | STO 6 TN                   | 17          | 6               | 19 | 9,8  | 10 | 10              | 13             | 0,3            | 3,75                         | 4,5                            | 0,58                                        | 10.000                                                                      |
| 24                     | RSTO 8 TN                     | 21          | STO 8 TN                   | 26          | 8               | 24 | 9,8  | 10 | 12              | 15             | 0,3            | 4,2                          | 5,5                            | 0,7                                         | 8.000                                                                       |
| 30                     | RSTO 10                       | 42          | RTO 10                     | 49          | 10              | 30 | 11,8 | 12 | 14              | 20             | 0,3            | 8,4                          | 9,2                            | 1,17                                        | 5.500                                                                       |
| 32                     | RSTO 12                       | 49          | RTO 12                     | 57          | 12              | 32 | 11,8 | 12 | 16              | 22             | 0,3            | 8,9                          | 10,1                           | 1,28                                        | 4.500                                                                       |
| 35                     | RSTO 15                       | 50          | STO 15                     | 63          | 15              | 35 | 11,8 | 12 | 20              | 26             | 0,3            | 9,1                          | 10,7                           | 1,35                                        | 3.300                                                                       |
| 40                     | RSTO 17                       | 88          | STO 17                     | 107         | 17              | 40 | 15,8 | 16 | 22              | 29             | 0,3            | 14,3                         | 17,7                           | 2,19                                        | 2.800                                                                       |
| 47                     | RSTO 20                       | 130         | STO 20                     | 152         | 20              | 47 | 15,8 | 16 | 25              | 32             | 0,3            | 16,2                         | 21,5                           | 2,7                                         | 2.400                                                                       |
| 52                     | RSTO 25                       | 150         | STO 25                     | 177         | 25              | 52 | 15,8 | 16 | 30              | 37             | 0,3            | 16,5                         | 22,9                           | 2,85                                        | 1.800                                                                       |
| 62                     | RSTO 30                       | 255         | STO 30                     | 308         | 30              | 62 | 19,8 | 20 | 38              | 46             | 0,6            | 23,3                         | 35                             | 4                                           | 1.300                                                                       |
| 72                     | RSTO 35                       | 375         | STO 35                     | 441         | 35              | 72 | 19,8 | 20 | 42              | 50             | 0,6            | 25,5                         | 40                             | 4,55                                        | 1.100                                                                       |
| 80                     | RSTO 40                       | 420         | STO 40                     | 530         | 40              | 80 | 19,8 | 20 | 50              | 58             | 1              | 24                           | 39                             | 4,95                                        | 850                                                                         |
| 85                     | RSTO 45                       | 453         | STO 45                     | 576         | 45              | 85 | 19,8 | 20 | 55              | 63             | 1              | 25,5                         | 43                             | 4,95                                        | 750                                                                         |
| 90                     | RSTO 50                       | 481         | STO 50                     | 617         | 50              | 90 | 19,8 | 20 | 60              | 68             | 1              | 26                           | 46,5                           | 5,4                                         | 650                                                                         |

TN = Plastic cage, permissible functioning temperature: 120° C (continuous functioning)

1) F = Track diameter of the inner ring

F<sub>w</sub> = Needle roller enveloping circle in tolerance range F6

2) Number of spins in continuous operation and for grease lubrication



RNA22 SERIES

NA22 SERIES

Support rollers RNA22, NA22, NATV & NATR have a thick outer ring necessary to guarantee the mechanical resistance suitable for limiting to a minimum the deformations under load. The rounded external profile allows to compensate for possible mismatches present in the parts surrounding the bearing, to reduce the hertzian contact pressure and so less usury and longer duration of the track.

Rollers are held in a radial cage made with a stamped sheet metal that allows the bearing to reach high operating speeds.

These bearings don't allow the use in applications in which are present axial loads but they allow small axial displacements of the outer ring.

They can be internally protected by adding sealing lips, not creeping seals and labyrinth seals.

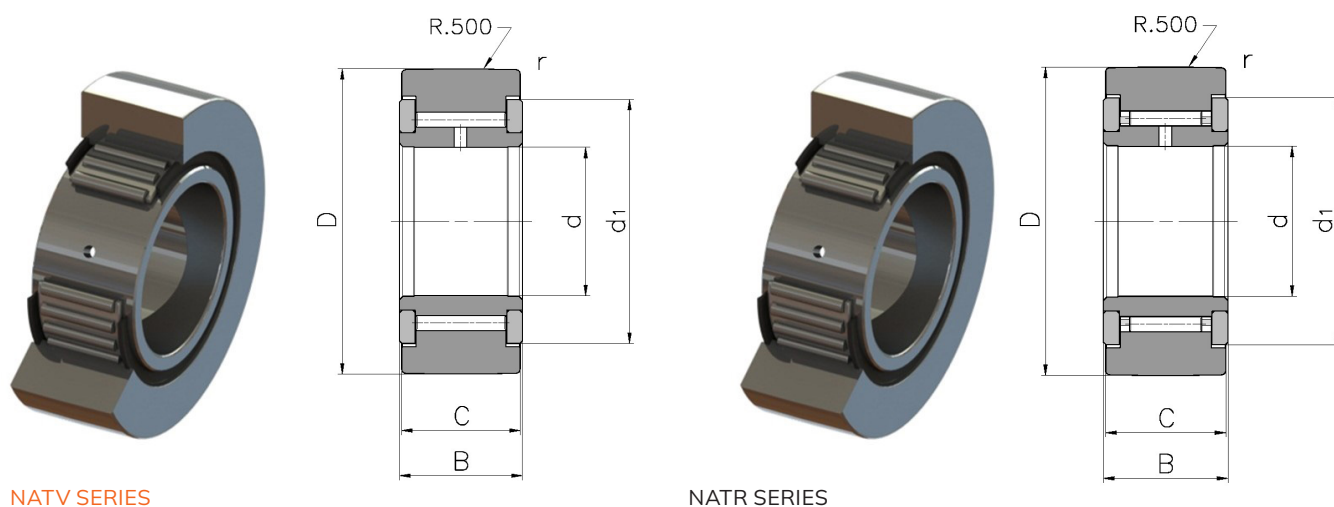
| External diameter<br>D | CODE<br>Without<br>inner ring | Weight<br>g | CODE<br>With<br>inner ring | Weight<br>g | Dimensions (mm) |    |      |    |                                   |                |     |                | Basic load ratings   |                       | Fatigue load limit   | Speed ratings <sup>1)</sup>                |
|------------------------|-------------------------------|-------------|----------------------------|-------------|-----------------|----|------|----|-----------------------------------|----------------|-----|----------------|----------------------|-----------------------|----------------------|--------------------------------------------|
|                        |                               |             |                            |             | d               | D  | C    | B  | F <sup>1)</sup><br>F <sub>w</sub> | D <sub>1</sub> | r   | r <sub>1</sub> | C <sub>w</sub><br>KN | C <sub>ow</sub><br>KN | P <sub>w</sub><br>KN | n <sub>D</sub> Grease<br>min <sup>-1</sup> |
| 19                     | RNA 22/6.2RS                  | 18          | NA 22/6.2RS                | 22          | 6               | 19 | 11,8 | 12 | 10                                | 16             | 0,3 | 0,3            | 3,9                  | 3,65                  | 0,41                 | 9.000                                      |
| 24                     | RNA 22/8.2RS                  | 29          | NA 22/8.2RS                | 34          | 8               | 24 | 11,8 | 12 | 12                                | 18             | 0,3 | 0,3            | 4,8                  | 4,8                   | 0,54                 | 7.000                                      |
| 30                     | RNA 2200.2RS                  | 52          | NA 2200.2RS                | 60          | 10              | 30 | 13,8 | 14 | 14                                | 20             | 0,6 | 0,3            | 7                    | 8                     | 0,96                 | 5.500                                      |
| 32                     | RNA 2201.2RS                  | 57          | NA 2201.2RS                | 67          | 12              | 32 | 13,8 | 14 | 16                                | 22             | 0,6 | 0,3            | 7,5                  | 9                     | 1,08                 | 4.700                                      |
| 35                     | RNA 2202.2RS                  | 60          | NA 2202.2RS                | 75          | 15              | 35 | 13,8 | 14 | 20                                | 26             | 0,6 | 0,3            | 7,6                  | 9,5                   | 1,15                 | 3.400                                      |
| 40                     | RNA 2203.2RS                  | 94          | NA 2203.2RS                | 112         | 17              | 40 | 15,8 | 16 | 22                                | 28             | 1   | 0,3            | 9,9                  | 13,7                  | 1,62                 | 3.000                                      |
| 47                     | RNA 2204.2RS                  | 152         | NA 2204.2RS                | 177         | 20              | 47 | 17,8 | 18 | 25                                | 33             | 1   | 0,3            | 15,2                 | 18,3                  | 2,3                  | 2.300                                      |
| 52                     | RNA 2205.2RS                  | 179         | NA 2205.2RS                | 209         | 25              | 52 | 17,8 | 18 | 30                                | 38             | 1   | 0,3            | 15,7                 | 20                    | 2,5                  | 1.800                                      |
| 62                     | RNA 2206.2RS                  | 284         | NA 2206.2RS                | 324         | 30              | 62 | 19,8 | 20 | 35                                | 43             | 1   | 0,3            | 18,4                 | 25,5                  | 3                    | 1.400                                      |
| 72                     | RNA 2207.2RS                  | 432         | NA 2207.2RS                | 505         | 35              | 72 | 22,7 | 23 | 42                                | 50             | 1,1 | 0,6            | 23                   | 35,5                  | 4,35                 | 1.100                                      |
| 80                     | RNA 2208.2RS                  | 530         | NA 2208.2RS                | 628         | 40              | 80 | 22,7 | 23 | 48                                | 57             | 1,1 | 0,6            | 27,5                 | 40,5                  | 4,6                  | 850                                        |
| 85                     | RNA 2209.2RS                  | 545         | NA 2209.2RS                | 655         | 45              | 85 | 22,7 | 23 | 52                                | 62             | 1,1 | 0,6            | 28,5                 | 43                    | 4,9                  | 800                                        |
| 90                     | RNA 2210.2RS                  | 563         | NA 2210.2RS                | 690         | 50              | 90 | 22,7 | 23 | 58                                | 68             | 1,1 | 0,6            | 28                   | 42,5                  | 4,8                  | 650                                        |

Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120° C (continuous functioning)

1) F = Track diameter of the inner ring

FW = Needle roller enveloping circle in tolerance range F6

2) Number of spins in continuous operation and for grease lubrication


**NATV SERIES**
**NATR SERIES**

| external diameter | CODE    | Weight | CODE       | Weight | Dimensions (mm) |    |    |    |                |           | Basic load ratings           |                                | Fatigue load limit   | Speed ratings <sup>1)</sup>                |
|-------------------|---------|--------|------------|--------|-----------------|----|----|----|----------------|-----------|------------------------------|--------------------------------|----------------------|--------------------------------------------|
|                   |         | g      | With seals | g      | d               | D  | C  | B  | d <sub>1</sub> | rs<br>min | dyn.<br>C <sub>w</sub><br>KN | stat.<br>C <sub>ow</sub><br>KN | P <sub>w</sub><br>KN | n <sub>D</sub> Grease<br>min <sup>-1</sup> |
| 16                | NATR 5  | 14     | NATR 5 PP  | 14     | 5               | 16 | 11 | 12 | 12             | 0,15      | 3,15                         | 3,3                            | 0,41                 | 14.000                                     |
|                   | NATV 5  | 15     | NATV 5 PP  | 15     | 5               | 16 | 11 | 12 | 12             | 0,15      | 4,85                         | 6,5                            | 0,85                 | 3.800                                      |
| 19                | NATR 6  | 20     | NATR 6 PP  | 20     | 6               | 19 | 11 | 12 | 14             | 0,15      | 3,5                          | 3,9                            | 0,485                | 11.000                                     |
|                   | NATV 6  | 21     | NATV 6 PP  | 21     | 6               | 19 | 11 | 12 | 14             | 0,15      | 5,5                          | 7,9                            | 1,03                 | 3.100                                      |
| 24                | NATR 8  | 41     | NATR 8 PP  | 41     | 8               | 24 | 14 | 15 | 19             | 0,3       | 5,5                          | 6,4                            | 0,81                 | 7.500                                      |
|                   | NATV 8  | 42     | NATV 8 PP  | 42     | 8               | 24 | 14 | 15 | 19             | 0,3       | 7,8                          | 11,4                           | 1,42                 | 2.500                                      |
| 30                | NATR 10 | 64     | NATR 10 PP | 64     | 10              | 30 | 14 | 15 | 23             | 0,6       | 6,8                          | 8,4                            | 1,07                 | 5.500                                      |
| 45                | NATV 10 | 65     | NATV 10 PP | 65     | 10              | 30 | 14 | 15 | 23             | 0,6       | 9,5                          | 14,6                           | 1,82                 | 2.100                                      |
| 32                | NATR 12 | 71     | NATR 12 PP | 71     | 12              | 32 | 14 | 15 | 25             | 0,6       | 6,9                          | 8,8                            | 1,11                 | 4.500                                      |
|                   | NATV 12 | 72     | NATV 12 PP | 72     | 12              | 32 | 14 | 15 | 25             | 0,6       | 9,7                          | 15,4                           | 1,92                 | 1.800                                      |
| 35                | NATR 15 | 103    | NATR 15 PP | 103    | 15              | 35 | 18 | 19 | 27             | 0,6       | 9,7                          | 14,1                           | 1,68                 | 3.600                                      |
|                   | NATV 15 | 105    | NATV 15 PP | 105    | 15              | 35 | 18 | 19 | 27             | 0,6       | 12,8                         | 23                             | 2,9                  | 1.600                                      |
| 40                | NATR 17 | 144    | NATR 17 PP | 144    | 17              | 40 | 20 | 21 | 32             | 1         | 10,9                         | 15,5                           | 1,83                 | 2.900                                      |
|                   | NATV 17 | 152    | NATV 17 PP | 152    | 17              | 40 | 20 | 21 | 32             | 1         | 14,8                         | 27                             | 3                    | 1.400                                      |
| 47                | NATR 20 | 246    | NATR 20 PP | 246    | 20              | 47 | 24 | 25 | 37             | 1         | 15,5                         | 25,5                           | 3                    | 2.400                                      |
|                   | NATV 20 | 254    | NATV 20 PP | 254    | 20              | 47 | 24 | 25 | 37             | 1         | 20,6                         | 42,0                           | 5,2                  | 1.300                                      |
| 52                | NATR 25 | 275    | NATR 25 PP | 275    | 25              | 52 | 24 | 25 | 42             | 1         | 15,4                         | 26,5                           | 3,05                 | 1.800                                      |
|                   | NATV 25 | 285    | NATV 25 PP | 285    | 25              | 52 | 24 | 25 | 42             | 1         | 20,5                         | 44                             | 5,4                  | 1.000                                      |
| 62                | NATR 30 | 470    | NATR 30 PP | 470    | 30              | 62 | 28 | 29 | 51             | 1         | 23,6                         | 38,5                           | 4,55                 | 1.300                                      |
|                   | NATV 30 | 481    | NATV 30 PP | 481    | 30              | 62 | 28 | 29 | 51             | 1         | 30,5                         | 62                             | 7,7                  | 850                                        |
| 72                | -       | -      | NATR 35 PP | 635    | 35              | 72 | 28 | 29 | 58             | 1,1       | 25,5                         | 44,5                           | 5,2                  | 1.000                                      |
|                   | -       | -      | NATV 35 PP | 647    | 35              | 72 | 28 | 29 | 58             | 1,1       | 33                           | 73                             | 9                    | 750                                        |
| 80                | -       | -      | NATR 40 PP | 805    | 40              | 80 | 30 | 32 | 66             | 1,1       | 33                           | 59                             | 6,9                  | 850                                        |
|                   | -       | -      | NATV 40 PP | 890    | 40              | 80 | 30 | 32 | 66             | 1,1       | 41                           | 90                             | 11,2                 | 650                                        |
| 90                | -       | -      | NATR 50 PP | 960    | 50              | 90 | 30 | 32 | 76             | 1,1       | 32                           | 59                             | 6,9                  | 650                                        |
|                   | -       | -      | NATV 50 PP | 990    | 50              | 90 | 30 | 32 | 76             | 1,1       | 40,5                         | 93                             | 11,6                 | 550                                        |

Bearing with lip seal (suffix PP); permissible functioning temperature – 30° C till 100° C

1) Number of spins in continuous operation and for grease lubrication



These rollers have a great thickness outer ring necessary to guarantee the mechanical resistance suitable for limiting deformations under load to a minimum and withstanding shocks in the best possible way.

The rounded external profile allows to compensate for possible misalignments present in the parts surrounding the bearing, to reduce the Hertzian contact pressure and therefore to guarantee less wear and a longer life of the counter track.

The full complement of rollers execution allows these support rollers to withstand high loads, while keeping the overall dimensions reduced.

The presence of integrated and grinded flanges in the outer ring allows these bearings to be used in applications where there is the presence of axial loads. They are mainly used on camshaft, as pressure rollers and as wheels in conveyors.

| external diameter | CODE           | Weight<br>g | Dimensions (mm) |    |    |    |                |     |                | Basic load ratings           |                                | Fatigue load limit<br>P <sub>W</sub><br>KN | Speed ratings <sup>1)</sup><br>n <sub>D</sub> Grease<br>min <sup>-1</sup> |
|-------------------|----------------|-------------|-----------------|----|----|----|----------------|-----|----------------|------------------------------|--------------------------------|--------------------------------------------|---------------------------------------------------------------------------|
|                   |                |             | d               | D  | B  | C  | d <sub>1</sub> | r   | r <sub>1</sub> | dyn.<br>C <sub>W</sub><br>KN | stat.<br>C <sub>OW</sub><br>KN |                                            |                                                                           |
| 35                | NUTR 15        | 99          | 15              | 35 | 19 | 18 | 20             | 0,6 | 0,3            | 15                           | 16,8                           | 2,22                                       | 6.500                                                                     |
|                   | PWTR 15.2RS    | 99          | 15              | 35 | 19 | 18 | 20             | 0,6 | 0,3            | 11,6                         | 11,3                           | 1,78                                       | 6.000                                                                     |
| 40                | NUTR 17        | 147         | 17              | 40 | 21 | 20 | 22             | 1   | 0,5            | 18,4                         | 22,6                           | 2,9                                        | 5.500                                                                     |
|                   | PWTR 17.2RS    | 147         | 17              | 40 | 21 | 20 | 22             | 1   | 0,5            | 13,2                         | 13,8                           | 2,2                                        | 5.000                                                                     |
| 42                | NUTR 15 42     | 158         | 15              | 42 | 19 | 18 | 20             | 0,6 | 0,3            | 18,1                         | 21,9                           | 2,9                                        | 6.500                                                                     |
|                   | PWTR 15.42.2RS | 158         | 15              | 42 | 19 | 18 | 20             | 0,6 | 0,3            | 13,5                         | 14,1                           | 2,23                                       | 6.000                                                                     |
| 47                | NUTR 17 47     | 220         | 17              | 47 | 21 | 20 | 22             | 1   | 0,5            | 21,3                         | 28                             | 3,6                                        | 5.500                                                                     |
|                   | PWTR 17 47.2RS | 220         | 17              | 47 | 21 | 20 | 22             | 1   | 0,5            | 14,8                         | 16,4                           | 2,6                                        | 5.000                                                                     |
|                   | NUTR 20        | 245         | 20              | 47 | 25 | 24 | 27             | 1   | 0,5            | 28                           | 35                             | 4,4                                        | 4.200                                                                     |
|                   | PWTR 20.2RS    | 245         | 20              | 47 | 25 | 24 | 27             | 1   | 0,5            | 23,2                         | 25,5                           | 3,6                                        | 3.800                                                                     |
| 52                | NUTR 20 52     | 321         | 20              | 52 | 25 | 24 | 27             | 1   | 0,5            | 31,5                         | 41                             | 5,2                                        | 4.200                                                                     |
|                   | PWTR 20 52.2RS | 321         | 20              | 52 | 25 | 24 | 27             | 1   | 0,5            | 25,5                         | 29,5                           | 4,15                                       | 3.800                                                                     |
|                   | NUTR 25        | 281         | 25              | 52 | 25 | 24 | 31             | 1   | 0,5            | 29                           | 37,5                           | 4,7                                        | 3.400                                                                     |
|                   | PWTR 25.2RS    | 281         | 25              | 52 | 25 | 24 | 31             | 1   | 0,5            | 24,2                         | 28                             | 3,9                                        | 3.800                                                                     |
| 62                | NUTR 25 62     | 450         | 25              | 62 | 25 | 24 | 31             | 1   | 0,5            | 35,5                         | 50                             | 6,3                                        | 3.400                                                                     |
|                   | PWTR 25 62.2RS | 450         | 25              | 62 | 25 | 24 | 31             | 1   | 0,5            | 29                           | 36                             | 5                                          | 3.800                                                                     |
|                   | NUTR 30        | 465         | 30              | 62 | 29 | 28 | 38             | 1   | 0,5            | 40                           | 50                             | 6,3                                        | 2.600                                                                     |
|                   | PWTR 30.2RS    | 465         | 30              | 62 | 29 | 28 | 38             | 1   | 0,5            | 35                           | 39,5                           | 5,4                                        | 2.200                                                                     |

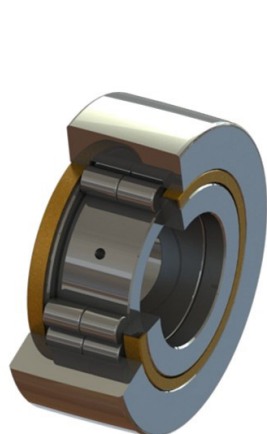
Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120°

1) Number of spins in continuous functioning and for grease lubrication

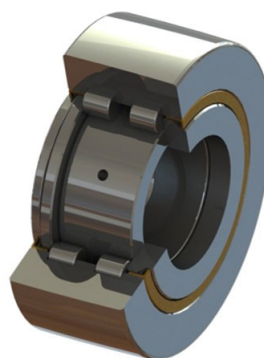
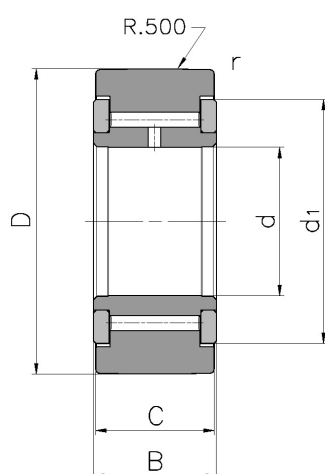


# NUTR - PWTR SERIES

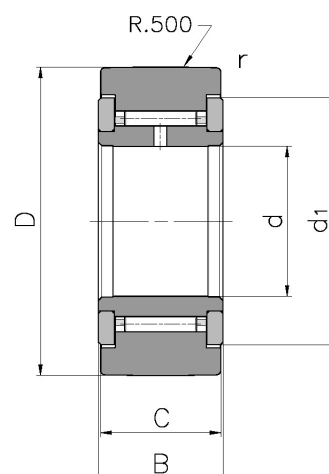
**DISTITEC**



NUTR SERIES



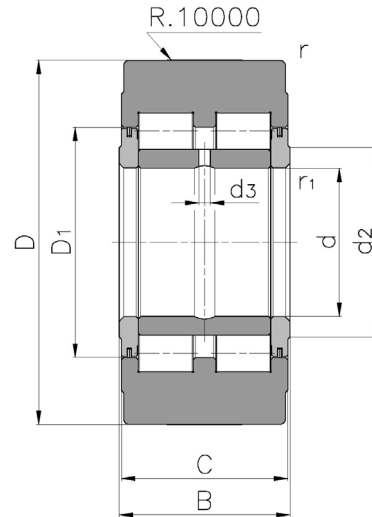
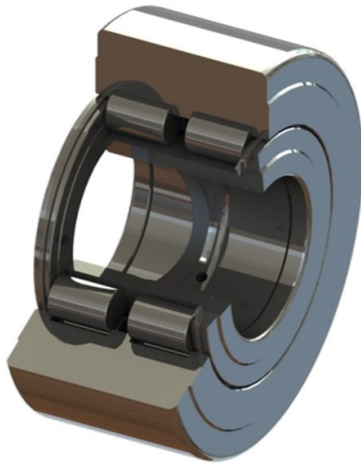
PWTR SERIES



| external diameter | CODE            | Weight<br>g | Dimensions (mm) |     |    |    |                |     |                | Basic load ratings           |                                | Fatigue load limit   | Speed ratings <sup>1)</sup>                |
|-------------------|-----------------|-------------|-----------------|-----|----|----|----------------|-----|----------------|------------------------------|--------------------------------|----------------------|--------------------------------------------|
|                   |                 |             | d               | D   | B  | C  | d <sub>1</sub> | r   | r <sub>1</sub> | dyn.<br>C <sub>w</sub><br>KN | stat.<br>C <sub>0w</sub><br>KN | P <sub>w</sub><br>KN | n <sub>D</sub> Grease<br>min <sup>-1</sup> |
| 72                | NUTR 30 72      | 697         | 30              | 72  | 29 | 28 | 38             | 1   | 0,5            | 47,5                         | 64                             | 8,1                  | 2.600                                      |
|                   | PWTR 30. 72.2RS | 697         | 30              | 72  | 29 | 28 | 38             | 1   | 0,5            | 41                           | 49                             | 6,7                  | 2.200                                      |
|                   | NUTR 35         | 630         | 35              | 72  | 29 | 28 | 44             | 1,1 | 0,6            | 44,5                         | 60                             | 7,6                  | 2.100                                      |
|                   | PWTR 35.2RS     | 630         | 35              | 72  | 29 | 28 | 44             | 1,1 | 0,6            | 38,5                         | 46,5                           | 6,3                  | 1.800                                      |
| 80                | NUTR 35 80      | 836         | 35              | 80  | 29 | 28 | 44             | 1,1 | 0,6            | 51                           | 72                             | 9,1                  | 2.100                                      |
|                   | PWTR 35 80.2RS  | 836         | 35              | 80  | 29 | 28 | 44             | 1,1 | 0,6            | 43,5                         | 55                             | 7,5                  | 1.800                                      |
|                   | NUTR 40         | 816         | 40              | 80  | 32 | 30 | 51             | 1,1 | 0,6            | 55                           | 75                             | 9,4                  | 1.600                                      |
|                   | PWTR 40.2RS     | 816         | 40              | 80  | 32 | 30 | 51             | 1,1 | 0,6            | 44,5                         | 53                             | 7,1                  | 1.500                                      |
| 85                | NUTR 45         | 883         | 45              | 85  | 32 | 30 | 55             | 1,1 | 0,6            | 56                           | 78                             | 9,7                  | 1.400                                      |
|                   | PWTR 45.2RS     | 883         | 45              | 85  | 32 | 30 | 55             | 1,1 | 0,6            | 45                           | 55                             | 7,4                  | 1.300                                      |
| 90                | NUTR 40 90      | 1129        | 40              | 90  | 32 | 30 | 51             | 1,1 | 0,6            | 66                           | 95                             | 11,9                 | 1.600                                      |
|                   | PWTR 40 90.2RS  | 1129        | 40              | 90  | 32 | 30 | 51             | 1,1 | 0,6            | 52                           | 66                             | 8,8                  | 1.500                                      |
|                   | NUTR 50         | 950         | 50              | 90  | 32 | 30 | 60             | 1,1 | 0,6            | 57                           | 81                             | 10,1                 | 1.300                                      |
|                   | PWTR 50.2RS     | 950         | 50              | 90  | 32 | 30 | 60             | 1,1 | 0,6            | 45,5                         | 57                             | 7,7                  | 1.100                                      |
| 100               | NUTR 45 100     | 1396        | 45              | 100 | 32 | 30 | 55             | 1,1 | 0,6            | 71                           | 107                            | 13,3                 | 1.400                                      |
|                   | PWTR 45 100.2RS | 1396        | 45              | 100 | 32 | 30 | 55             | 1,1 | 0,6            | 56                           | 74                             | 9,9                  | 1.300                                      |
| 110               | NUTR 50 110     | 1690        | 50              | 110 | 32 | 30 | 60             | 1,1 | 0,6            | 76                           | 120                            | 14,9                 | 1.300                                      |
|                   | PWTR 50 110.2RS | 1690        | 50              | 110 | 32 | 30 | 60             | 1,1 | 0,6            | 59                           | 82                             | 11                   | 1.100                                      |

Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120°

1) Number of spins in continuous functioning and for grease lubrication



NNTR Roller have a great thickness outer ring necessary to guarantee the mechanical resistance suitable for limiting deformations under load to a minimum and withstanding shocks in the best possible way. The rounded external profile allows to compensate for possible misalignments present in the parts surrounding the bearing, to reduce the Hertzian contact pressure and therefore to guarantee less wear and a longer life of the counter track.

The full complement of rollers execution allows these support rollers to withstand high loads, while keeping the overall dimensions reduced. The presence of integrated and grinded flanges in the outer ring allows these bearings to be used in applications where axial loads are present.

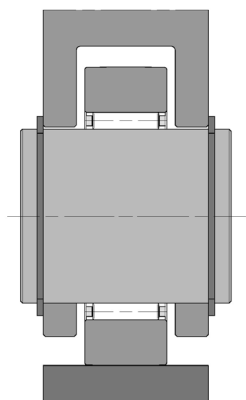
They are mainly used on camshaft, as pressure rollers and as wheels in conveyors.

| CODE                 | Weight<br>g | Dimensions (mm) |     |     |     |                |                |                |                |                |                 | Basic load ratings           |                                | Fatigue load limit   | Speed ratings <sup>1)</sup>                |
|----------------------|-------------|-----------------|-----|-----|-----|----------------|----------------|----------------|----------------|----------------|-----------------|------------------------------|--------------------------------|----------------------|--------------------------------------------|
|                      |             | d               | D   | B   | C   | D <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | r <sub>1</sub> | r <sub>2</sub> | n <sup>1)</sup> | dyn.<br>C <sub>w</sub><br>KN | stat.<br>C <sub>ow</sub><br>KN | P <sub>w</sub><br>KN | n <sub>D</sub> Grease<br>min <sup>-1</sup> |
| NNTR 50x130x65-2ZL   | 5,2         | 50              | 130 | 65  | 63  | 80             | 63             | 6              | 2              | 3              | 3               | 226                          | 285                            | 37                   | 1.100                                      |
| NNTR 55x140x70-2ZL   | 6,4         | 55              | 140 | 70  | 68  | 91             | 73             | 4              | 2              | 3              | 3               | 275                          | 365                            | 44,5                 | 850                                        |
| NNTR 60x150x75-2ZL   | 7,8         | 60              | 150 | 75  | 73  | 97             | 78             | 4              | 2              | 3              | 3               | 310                          | 420                            | 53                   | 800                                        |
| NNTR 65x160x75-2ZL   | 8,8         | 65              | 160 | 75  | 73  | 103            | 82             | 5              | 2              | 3              | 3               | 335                          | 445                            | 56                   | 700                                        |
| NNTR 70x180x85-2ZL   | 13          | 70              | 180 | 85  | 83  | 115            | 92             | 5              | 2              | 3              | 3               | 430                          | 590                            | 75                   | 600                                        |
| NNTR 80x200x90-2ZL   | 16,8        | 80              | 200 | 90  | 88  | 127            | 102            | 5              | 2              | 4              | 3               | 510                          | 700                            | 87                   | 500                                        |
| NNTR 90x220x100-2ZL  | 22,5        | 90              | 220 | 100 | 98  | 146            | 119            | 5              | 2,5            | 4              | 3               | 630                          | 910                            | 104                  | 400                                        |
| NNTR 100x240x105-2ZL | 28          | 100             | 240 | 105 | 103 | 160            | 132            | 6              | 2,5            | 4              | 6               | 720                          | 1080                           | 118                  | 340                                        |
| NNTR 110x260x135-2ZL | 35,6        | 110             | 260 | 115 | 113 | 174            | 143            | 6              | 2,5            | 4              | 6               | 860                          | 1310                           | 143                  | 300                                        |
| NNTR 130x310x146-2ZL | 65,2        | 130             | 310 | 146 | 144 | 204            | 165            | 8              | 3              | 5              | 6               | 1290                         | 2010                           | 216                  | 240                                        |

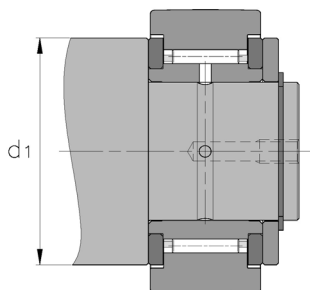
Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120°

1) Number of holes for inner lubrication

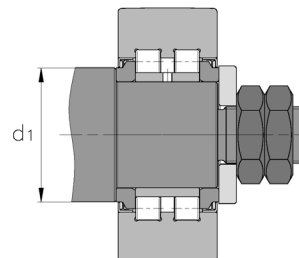
2) Number of spins in continuous functioning and for grease lubrication



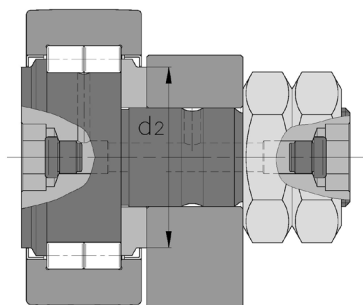
Support roller RSTO assembly situation



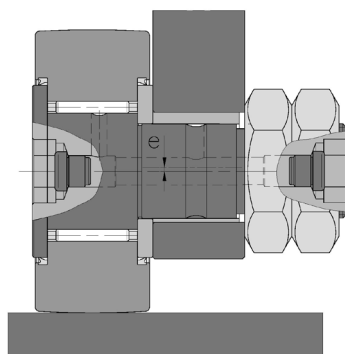
Dimension "d1"  
and support roller NATR  
assembly situation



Dimension "d1"  
and support roller PWTR...2RS  
assembly situation



Lubrication hole, greaser, closing  
plug



Position of the lubrication hole,  
higher position of the eccentric

These types of support rollers have a thick outer ring necessary to guarantee the mechanical resistance suitable for limiting to a minimum the deformations under load and better support bumps.

The rounded external profile allows to compensate for possible mismatches present in the parts surrounding the bearing, to reduce the hertzian contact pressure and so less usury and longer duration of the track.

These types of products form a single assembly group and since there is a thread on the stud, they guarantee an easy assembly. Concerning the lubrication, there are holes both on the lateral surface and at both ends of the stud

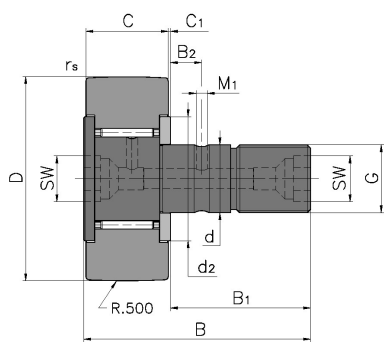
Since these rollers are made to slide on flat rolling tracks, an elastic deformation of their outer ring may occur, therefore it is advisable to use as a reference the loads as a wheel (Cw e C0w).

| external diameter | CODE      | Weight | CODE With eccentric ring | Weight | Dimensions (mm) |    |    |                |     |                |                |         |
|-------------------|-----------|--------|--------------------------|--------|-----------------|----|----|----------------|-----|----------------|----------------|---------|
|                   |           | g      |                          | g      | D               | d  | C  | r <sub>s</sub> | B   | B <sub>1</sub> | B <sub>2</sub> | G       |
|                   |           |        |                          |        |                 | h7 |    | min            |     |                |                |         |
| 16                | KR 16     | 18     | -                        | 20     | 16              | 6  | 11 | 0,15           | 28  | 16             | -              | M6x1    |
|                   | KR 16 PP  | 18     | KRE 16                   | 20     | 16              | 6  | 11 | 0,15           | 28  | 16             | -              | M6x1    |
|                   | KRV 16 PP | 20     | -                        | 22     | 16              | 6  | 11 | 0,15           | 28  | 16             | -              | M6x1    |
| 19                | KR 19     | 28     | -                        | 31     | 19              | 8  | 11 | 0,15           | 32  | 20             | -              | M8x1,25 |
|                   | KR 19 PP  | 28     | KRE 19                   | 31     | 19              | 8  | 11 | 0,15           | 32  | 20             | -              | M8x1,25 |
|                   | KRV 19 PP | 32     | -                        | 35     | 19              | 8  | 11 | 0,15           | 32  | 20             | -              | M8x1,25 |
| 22                | KR 22     | 44     | -                        | 48     | 22              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
|                   | KR 22 PP  | 44     | KRE 22                   | 48     | 22              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
|                   | KRV 22 PP | 45     | -                        | 49     | 22              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
| 26                | KR 26     | 58     | -                        | 62     | 26              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
|                   | KR 26 PP  | 58     | KRE 26                   | 62     | 26              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
|                   | KRV 26 PP | 61     | -                        | 65     | 26              | 10 | 12 | 0,3            | 36  | 23             | -              | M10x1   |
| 30                | KR 30     | 87     | -                        | 93     | 30              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
|                   | KR 30 PP  | 87     | KRE 30                   | 93     | 30              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
|                   | KRV 30 PP | 89     | -                        | 95     | 30              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
| 32                | KR 32     | 98     | -                        | 104    | 32              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
|                   | KR 32 PP  | 98     | KRE 32                   | 104    | 32              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
|                   | KRV 32 PP | 100    | -                        | 106    | 32              | 12 | 14 | 0,6            | 40  | 25             | 6              | M12x1,5 |
| 35                | KR 35     | 169    | -                        | 182    | 35              | 16 | 18 | 0,6            | 52  | 32,5           | 8              | M16x1,5 |
|                   | KR 35 PP  | 169    | KRE 35                   | 182    | 35              | 16 | 18 | 0,6            | 52  | 32,5           | 8              | M16x1,5 |
|                   | KRV 35 PP | 171    | -                        | 184    | 35              | 16 | 18 | 0,6            | 52  | 32,5           | 8              | M16x1,5 |
| 40                | KR 40     | 247    | -                        | 263    | 40              | 18 | 20 | 1              | 58  | 36,5           | 8              | M18x1,5 |
|                   | KR 40 PP  | 247    | KRE 40                   | 263    | 40              | 18 | 20 | 1              | 58  | 36,5           | 8              | M18x1,5 |
|                   | KRV 40 PP | 249    | -                        | 265    | 40              | 18 | 20 | 1              | 58  | 36,5           | 8              | M18x1,5 |
| 47                | KR 47     | 386    | -                        | 406    | 47              | 20 | 24 | 1              | 66  | 40,5           | 9              | M20x1,5 |
|                   | KR 47 PP  | 386    | KRE 47                   | 406    | 47              | 20 | 24 | 1              | 66  | 40,5           | 9              | M20x1,5 |
| 52                | KR 52     | 461    | -                        | 481    | 52              | 20 | 24 | 1              | 66  | 40,5           | 9              | M20x1,5 |
|                   | KR 52 PP  | 461    | KRE 52                   | 481    | 52              | 20 | 24 | 1              | 66  | 40,5           | 9              | M20x1,5 |
| 62                | KR 62     | 790    | -                        | 818    | 62              | 24 | 29 | 1              | 80  | 49,5           | 11             | M24x1,5 |
|                   | KR 62 PP  | 802    | KRE 62                   | -      | 62              | 24 | 29 | 1              | 80  | 49,5           | 11             | M24x1,5 |
| 72                | KR 72     | 1040   | -                        | -      | 72              | 24 | 29 | 1,1            | 80  | 49,5           | 11             | M24x1,5 |
|                   | KR 72 PP  | 1045   | -                        | -      | 72              | 24 | 29 | 1,1            | 80  | 49,5           | 11             | M24x1,5 |
| 80                | KR 80     | 1550   | -                        | -      | 80              | 30 | 35 | 1,1            | 100 | 63             | 15             | M30x1,5 |
|                   | KR 80 PP  | 1561   | -                        | -      | 80              | 30 | 35 | 1,1            | 100 | 63             | 15             | M30x1,5 |
| 90                | KR 90     | 1950   | -                        | -      | 90              | 30 | 35 | 1,1            | 100 | 63             | 15             | M30x1,5 |
|                   | KR 90 PP  | 1950   | -                        | -      | 90              | 30 | 35 | 1,1            | 100 | 63             | 15             | M30x1,5 |

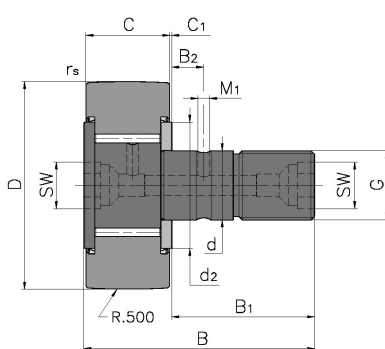
Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120°

1) Number of holes for inner lubrication

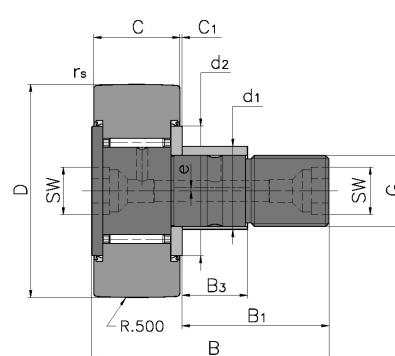
2) Number of spins in continuous functioning and for grease lubrication



KR / KR..PP



KRV..PP



KRE..PP

| G1 | SW   | M1 | C1  | d2 | eccentric ring |    |     | Nut tightening<br>torque<br>MA<br>Nm | Basic load<br>ratings        |                                | Fatigue load<br>limit<br>P <sub>W</sub><br>KN | Speed<br>ratings <sup>1)</sup><br>n <sub>D</sub> Grease<br>min <sup>-1</sup> |
|----|------|----|-----|----|----------------|----|-----|--------------------------------------|------------------------------|--------------------------------|-----------------------------------------------|------------------------------------------------------------------------------|
|    |      |    |     |    | d1<br>h9       | B3 | e   |                                      | dyn.<br>C <sub>W</sub><br>KN | stat.<br>C <sub>0W</sub><br>KN |                                               |                                                                              |
| 8  | Ø42) | -  | 0,6 | 12 | 9              | 7  | 0,5 | 3                                    | 3,15                         | 3,3                            | 0,41                                          | 14.000                                                                       |
| 8  | Ø42) | -  | 0,6 | 12 | 9              | 7  | 0,5 | 3                                    | 3,15                         | 3,3                            | 0,41                                          | 14.000                                                                       |
| 8  | Ø42) | -  | 0,6 | 12 | 9              | 7  | 0,5 | 3                                    | 4,85                         | 6,5                            | 0,85                                          | 3.800                                                                        |
| 10 | Ø42) | -  | 0,6 | 14 | 11             | 9  | 0,5 | 8                                    | 3,5                          | 3,9                            | 0,485                                         | 11.000                                                                       |
| 10 | Ø42) | -  | 0,6 | 14 | 11             | 9  | 0,5 | 8                                    | 3,5                          | 3,9                            | 0,485                                         | 11.000                                                                       |
| 10 | Ø42) | -  | 0,6 | 14 | 11             | 9  | 0,5 | 8                                    | 5,5                          | 7,9                            | 1,03                                          | 3.100                                                                        |
| 12 | 5    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 4,45                         | 5,2                            | 0,65                                          | 8.000                                                                        |
| 12 | 5    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 4,45                         | 5,2                            | 0,65                                          | 8.000                                                                        |
| 12 | 5    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 6,3                          | 9,1                            | 1,09                                          | 2.600                                                                        |
| 12 | 6    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 5,1                          | 6,2                            | 0,77                                          | 8.000                                                                        |
| 12 | 6    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 5,1                          | 6,2                            | 0,77                                          | 8.000                                                                        |
| 12 | 6    | -  | 0,6 | 17 | 13             | 10 | 0,5 | 15                                   | 7,3                          | 11,3                           | 1,36                                          | 2.600                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 6,8                          | 8,4                            | 1,07                                          | 5.500                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 6,8                          | 8,4                            | 1,07                                          | 5.500                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 9,5                          | 14,6                           | 1,82                                          | 2.100                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 7,1                          | 9                              | 1,14                                          | 5.500                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 7,1                          | 9                              | 1,14                                          | 5.500                                                                        |
| 13 | 6    | 3  | 0,6 | 23 | 15             | 11 | 0,5 | 22                                   | 10                           | 15,8                           | 1,97                                          | 2.100                                                                        |
| 17 | 8    | 3  | 0,8 | 27 | 20             | 14 | 1   | 58                                   | 9,7                          | 14,1                           | 1,68                                          | 3.600                                                                        |
| 17 | 6    | 3  | 0,8 | 27 | 20             | 14 | 1   | 58                                   | 9,7                          | 14,1                           | 1,68                                          | 3.600                                                                        |
| 17 | 8    | 3  | 0,8 | 27 | 20             | 14 | 1   | 58                                   | 12,8                         | 23                             | 3                                             | 1.600                                                                        |
| 19 | 8    | 3  | 0,8 | 32 | 22             | 16 | 1   | 87                                   | 10,9                         | 15,5                           | 1,83                                          | 2.900                                                                        |
| 19 | 8    | 3  | 0,8 | 32 | 22             | 16 | 1   | 87                                   | 10,9                         | 15,5                           | 1,83                                          | 2.900                                                                        |
| 19 | 8    | 3  | 0,8 | 32 | 22             | 16 | 1   | 87                                   | 14,8                         | 26,5                           | 3                                             | 1.400                                                                        |
| 21 | 10   | 4  | 0,8 | 37 | 24             | 18 | 1   | 120                                  | 15,5                         | 25,5                           | 3                                             | 2.400                                                                        |
| 21 | 10   | 4  | 0,8 | 37 | 24             | 18 | 1   | 120                                  | 15,5                         | 25,5                           | 3                                             | 2.400                                                                        |
| 21 | 10   | 4  | 0,8 | 37 | 24             | 18 | 1   | 120                                  | 16,8                         | 29                             | 3,4                                           | 2.400                                                                        |
| 21 | 10   | 4  | 0,8 | 37 | 24             | 18 | 1   | 120                                  | 16,8                         | 29                             | 3,4                                           | 2.400                                                                        |
| 25 | 14   | 4  | 0,8 | 44 | 28             | 22 | 1   | 220                                  | 26,5                         | 47,5                           | 6,1                                           | 1.900                                                                        |
| 25 | 14   | 4  | 0,8 | 44 | -              | -  | -   | 220                                  | 34                           | 76                             | 9,9                                           | 1.100                                                                        |
| 25 | 14   | 4  | 0,8 | 44 | -              | -  | -   | 220                                  | 28                           | 53                             | 6,7                                           | 1.900                                                                        |
| 25 | 14   | 4  | 0,8 | 44 | -              | -  | -   | 220                                  | 37                           | 85                             | 11,1                                          | 1.100                                                                        |
| 32 | 14   | 4  | 1   | 53 | -              | -  | -   | 450                                  | 39,5                         | 77                             | 9,7                                           | 1.300                                                                        |
| 32 | 14   | 4  | 1   | 53 | -              | -  | -   | 450                                  | 49,5                         | 120                            | 15,6                                          | 850                                                                          |
| 32 | 14   | 4  | 1   | 53 | -              | -  | -   | 450                                  | 41,5                         | 83                             | 10,5                                          | 1.300                                                                        |
| 32 | 14   | 4  | 1   | 53 | -              | -  | -   | 450                                  | 53                           | 130                            | 16,9                                          | 850                                                                          |

These types of support rollers have a thick outer ring necessary to guarantee the mechanical resistance suitable for limiting to a minimum the deformations under load and better support bumps.

The rounded external profile allows to compensate for possible mismatches present in the parts surrounding the bearing, to reduce the hertzian contact pressure and so less usury and longer duration of the track.

These types of products form a single assembly group and since there is a thread on the stud, they guarantee an easy assembly. Concerning the lubrication, there are holes both on the lateral surface and at both ends of the stud

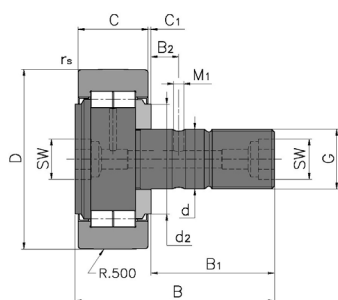
Since these rollers are made to slide on flat rolling tracks, an elastic deformation of their outer ring may occur, therefore it is advisable to use as a reference the loads as a wheel (Cw e C0w).

| external<br>diameter | CODE        | Weight | CODE                   | Weight | Dimensions (mm) |    |    |           |     |                |                |         |
|----------------------|-------------|--------|------------------------|--------|-----------------|----|----|-----------|-----|----------------|----------------|---------|
|                      |             | g      | with eccentric<br>ring | g      | D               | d  | C  | rs<br>min | B   | B <sub>1</sub> | B <sub>2</sub> | G       |
| 35                   | NUKR 35     | 164    | -                      | -      | 35              | 16 | 18 | 0,6       | 52  | 32,5           | 7,8            | M16x1,5 |
|                      | -           | -      | NUKRE 35               | 177    | 35              | 16 | 18 | 0,6       | 52  | 29,5           | -              | M16x1,5 |
|                      | PWKR 35.2RS | 164    | -                      | -      | 35              | 16 | 18 | 0,6       | 52  | 32,5           | 7,8            | M16x1,5 |
|                      | -           | -      | PWKRE 35.2RS           | 177    | 35              | 16 | 18 | 0,6       | 52  | 29,5           | -              | M16x1,5 |
| 40                   | NUKR 40     | 242    | -                      | -      | 40              | 18 | 20 | 1         | 58  | 36,5           | 8              | M18x1,5 |
|                      | -           | -      | NUKRE 40               | 258    | 40              | 18 | 20 | 1         | 58  | 33,5           | -              | M18x1,5 |
|                      | PWKR 40.2RS | 242    | -                      | -      | 40              | 18 | 20 | 1         | 58  | 36,5           | 8              | M18x1,5 |
|                      | -           | -      | PWKRE 40.2RS           | 258    | 40              | 18 | 20 | 1         | 58  | 33,5           | -              | M18x1,5 |
| 47                   | NUKR 47     | 380    | NUKRE 47               | 400    | 47              | 20 | 24 | 1         | 66  | 40,5           | 9              | M20x1,5 |
|                      | PWKR 47.2RS | 380    | PWKRE 47.2RS           | 400    | 47              | 20 | 24 | 1         | 66  | 40,5           | 9              | M20x1,5 |
| 52                   | NUKR 52     | 450    | NUKRE 52               | 470    | 52              | 20 | 24 | 1         | 66  | 40,5           | 9              | M20x1,5 |
|                      | PWKR 52.2RS | 450    | PWKRE 52.2RS           | 470    | 52              | 20 | 24 | 1         | 66  | 40,5           | 9              | M20x1,5 |
| 62                   | NUKR 62     | 795    | NUKRE 62               | 824    | 62              | 24 | 28 | 1         | 80  | 49,5           | 11             | M24x1,5 |
|                      | PWKR 62.2RS | 795    | PWKRE 62.2RS           | 824    | 62              | 24 | 28 | 1         | 80  | 49,5           | 11             | M24x1,5 |
| 72                   | NUKR 72     | 1020   | NUKRE 72               | 1050   | 72              | 24 | 28 | 1,1       | 80  | 49,5           | 11             | M24x1,5 |
|                      | PWKR 72.2RS | 1020   | PWKRE 72.2RS           | 1050   | 72              | 24 | 28 | 1,1       | 80  | 49,5           | 11             | M24x1,5 |
| 80                   | NUKR 80     | 1600   | NUKRE 80               | 1670   | 80              | 30 | 35 | 1,1       | 100 | 63             | 15             | M30x1,5 |
|                      | PWKR 80.2RS | 1600   | PWKRE 80.2RS           | 1670   | 80              | 30 | 35 | 1,1       | 100 | 63             | 15             | M30x1,5 |
| 90                   | NUKR 90     | 1960   | NUKRE 90               | 2020   | 90              | 30 | 35 | 1,1       | 100 | 63             | 15             | M30x1,5 |
|                      | PWKR 90.2RS | 1960   | PWKRE 90.2RS           | 2020   | 90              | 30 | 35 | 1,1       | 100 | 63             | 15             | M30x1,5 |

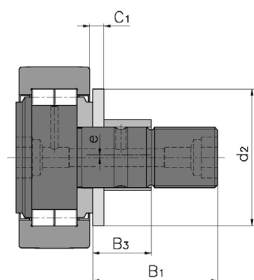
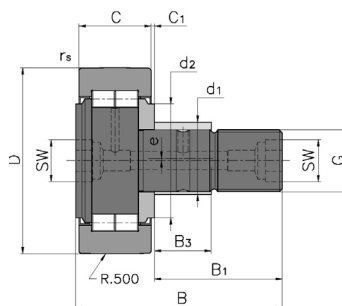
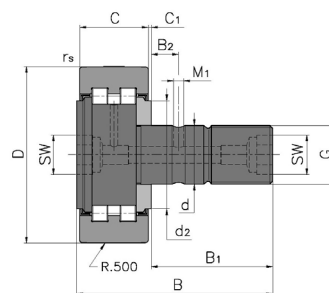
Bearing with lip seals (suffix 2RS); permissible functioning temperature -30° till 120°

1) Number of holes for inner lubrication

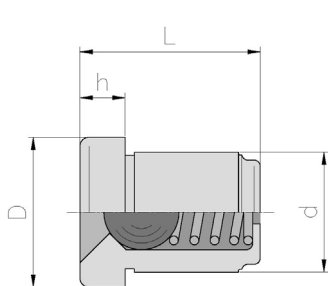
2) Number of spins in continuous functioning and for grease lubrication



NUKR


 NUKRE  
PWKRE...2RS

 NUKRE 35 / NUKRE 40  
PWKRE 35.2RS /  
PWKRE 40.2RS

 NUKRE  
PWKRE...2RS

| Dimensions (mm) |    |    |     |    | eccentric ring |    |     | Pressure greaser 1) | Nut tightening torque | Basic load ratings |                 | Fatigue load limit | Speed ratings <sup>1)</sup> |
|-----------------|----|----|-----|----|----------------|----|-----|---------------------|-----------------------|--------------------|-----------------|--------------------|-----------------------------|
| G1              | SW | M1 | C1  | d2 | d1             | B3 | e   |                     | MA                    | dyn.               | stat.           | P <sub>W</sub>     | n <sub>D</sub> Grease       |
|                 |    |    |     |    | h9             |    |     |                     | Nm                    | C <sub>W</sub>     | C <sub>0W</sub> | KN                 | min <sup>-1</sup>           |
| 17              | 8  | 3  | 0,8 | 20 | -              | -  | -   | NIP A2x7,5          | 58                    | 15                 | 16,8            | 2,22               | 6.500                       |
| 17              | 8  | -  | 3,8 | 27 | 20             | 12 | 1   | NIP A2x7,5          | 58                    | 15                 | 16,8            | 2,22               | 6.500                       |
| 17              | 8  | 3  | 0,8 | 20 | -              | -  | -   | NIP A2x7,5          | 58                    | 11,6               | 11,3            | 1,78               | 6.000                       |
| 17              | 8  | -  | 3,8 | 27 | 20             | 12 | 1   | NIP A2x7,5          | 58                    | 11,6               | 11,3            | 1,78               | 6.000                       |
| 19              | 8  | 3  | 0,8 | 22 | -              | -  | -   | NIP A2x7,5          | 87                    | 18,4               | 22,6            | 2,9                | 5.500                       |
| 19              | 8  | -  | 3,8 | 30 | 22             | 14 | 1   | NIP A2x7,5          | 87                    | 18,4               | 22,6            | 2,9                | 5.500                       |
| 19              | 8  | 3  | 0,8 | 22 | -              | -  | -   | NIP A2x7,5          | 87                    | 13,2               | 13,8            | 2,2                | 5.000                       |
| 19              | 8  | -  | 3,8 | 30 | 22             | 14 | 1   | NIP A2x7,5          | 87                    | 13,2               | 13,8            | 2,2                | 5.000                       |
| 21              | 10 | 4  | 0,8 | 27 | 24             | 18 | 1   | NIP A2x7,5          | 120                   | 28                 | 35              | 4,4                | 4.200                       |
| 21              | 10 | 4  | 0,8 | 27 | 24             | 18 | 1   | NIP A2x7,5          | 120                   | 23,2               | 25,5            | 3,6                | 3.800                       |
| 21              | 10 | 4  | 0,8 | 31 | 24             | 18 | 1   | NIP A2x7,5          | 120                   | 29                 | 37,5            | 4,7                | 3.400                       |
| 21              | 10 | 4  | 0,8 | 31 | 24             | 18 | 1   | NIP A2x7,5          | 120                   | 24,2               | 28              | 3,9                | 3.800                       |
| 25              | 14 | 4  | 1,3 | 38 | 28             | 22 | 1   | NIP A3x9,5          | 220                   | 40                 | 50              | 6,3                | 2.600                       |
| 25              | 14 | 4  | 1,3 | 38 | 28             | 22 | 1   | NIP A3x9,5          | 220                   | 35                 | 39,5            | 5,4                | 2.200                       |
| 25              | 14 | 4  | 1,3 | 44 | 28             | 22 | 1   | NIP A3x9,5          | 220                   | 44,5               | 60              | 7,6                | 2.100                       |
| 25              | 14 | 4  | 1,3 | 44 | 28             | 22 | 1   | NIP A3x9,5          | 220                   | 38,5               | 46,5            | 6,3                | 2.200                       |
| 32              | 14 | 4  | 1   | 47 | 35             | 29 | 1,5 | NIP A3x9,5          | 450                   | 69                 | 98              | 12,1               | 1.800                       |
| 32              | 14 | 4  | 1   | 47 | 35             | 29 | 1,5 | NIP A3x9,5          | 450                   | 56                 | 70              | 9,1                | 1.800                       |
| 32              | 14 | 4  | 1   | 47 | 35             | 29 | 1,5 | NIP A3x9,5          | 450                   | 79                 | 117             | 14,4               | 1.800                       |
| 32              | 14 | 4  | 1   | 47 | 35             | 29 | 1,5 | NIP A3x9,5          | 450                   | 63                 | 82              | 10,7               | 1.800                       |



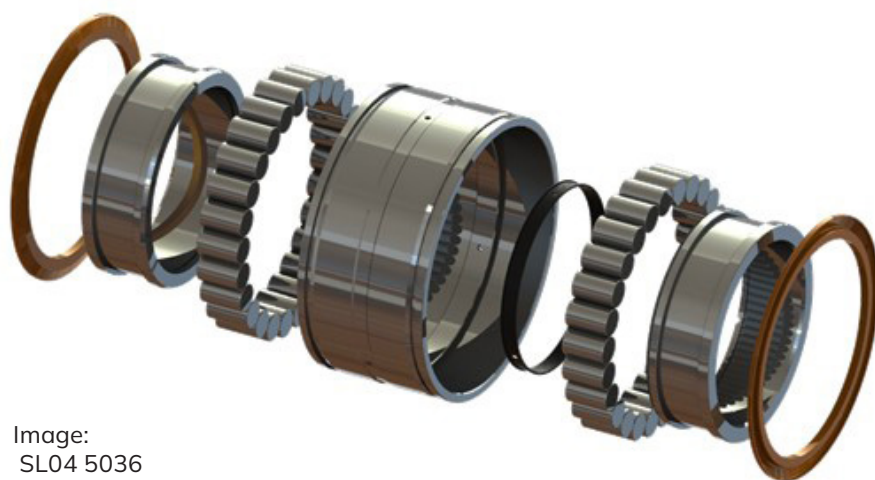
Pressure greaser

Pressure greaser for wheels:  
KR, KRE e KRV, NUKR, NUKRE, PWKR e PWKRE

| Greaser | Dimensions [mm] |   |    |     | Usable by sizes |
|---------|-----------------|---|----|-----|-----------------|
|         | D               | d | L  | H   |                 |
| NIP A1  | 6               | 4 | 6  | 1,5 | da 16 a 26      |
| NIP A1  | 8               | 6 | 9  | 2   | da 30 a 40      |
| NIP A1  | 10              | 8 | 12 | 3   | da 47 a 90      |



# TECHNICAL SPECIFICATIONS FOR FULL COMPLEMENT CYLINDRICAL ROLLER BEARINGS



- 1- Outer ring
- 2- Inner ring
- 3- Cylindrical roller
- 4- Sealing ring
- 5- Retaining ring
- 6- Retaining ring
- 7- Elastic ring
- 8- Semi- outer ring

Image:  
SL04 5036

Full complement cylindrical roller radial bearings that Distitec S.R.L produces have the following technical characteristics:

Outer and inner rings mainly made in full hardening steel 100Cr6 or 100CrMo7 (UNI 3097), steel with the best resistance characteristics to usury effort. Superficial hardness that can be reached for these components is 60+2 HRc. Some executions require the use of case-hardened steel 18NiCrMo5 (UNI 7846).

Cylindrical rollers made in full hardening steel 100Cr6 (UNI 3097) with hardness that can reach 62+2 HRc. Creeping seals made in nitrile elastomer NBR.

Retaining rings are needed, in bearings series SL 04....., to prevent bearing's disassembly during handling and transport. Once the bearing is assembled on its stud and specific site, these rings will stop being useful. In some series retaining rings are needed to prevent the outer ring from disassembling during handling and transport. These too, after the assembly, won't be needed anymore.

The dimensional precision and the rotation precision of these bearings is usually according to class P0 (DIN 620).

These bearings' rings are always subjected to a stabilization treatment that make the functioning possible up to a temperature of 150° without substantial dimensional changes of the same. Upon request rings with stabilization are supplied that allows functioning up to a temperature of 250° C.

Distitec's bearings with one or more rows of cylindrical rollers, full complement, are usually made with a normal inner radial clearance. Most of bearings are available also with higher clearance C3: values are compliant to ISO 5753:1991. Clearance limits are applied on bearings before the assembly and with zero load.



Image:  
SL01 4836

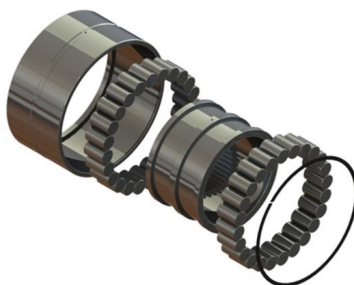


Image:  
SL18 5036



Image:  
SL18 2936

# DIMENSIONAL TABLES

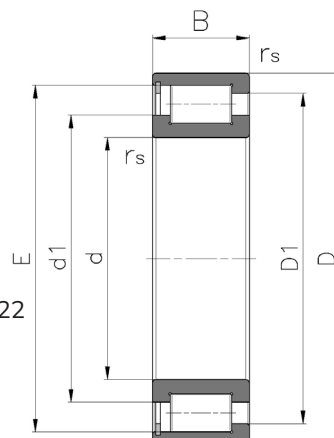
**DISTITEC**

Full complement cylindrical roller bearings,  
single row

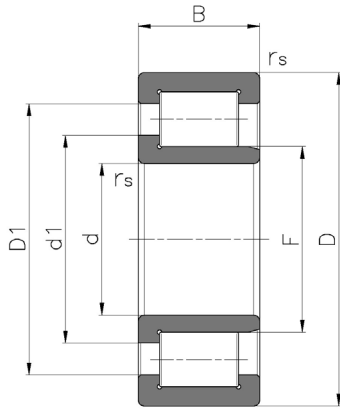
Support bearings:

SL18 29,  
SL 1830,  
SL18 22,  
SL19 23 Series

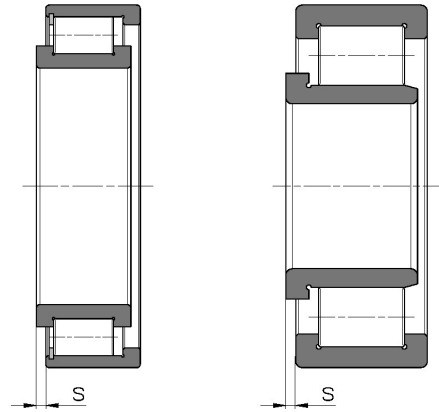
SL18 29, SL18 30, SL18 22  
(Support bearings)



| Ø<br>shafts | CODE      | Dimensions (mm) |     |    |     |     | Assembly dim. |                |                |       | Basic load ratings |                 | Fatigue load limit | Speed ratings <sup>1)</sup> | Speed ratings     | Weight |
|-------------|-----------|-----------------|-----|----|-----|-----|---------------|----------------|----------------|-------|--------------------|-----------------|--------------------|-----------------------------|-------------------|--------|
|             |           | d               | D   | B  | rs  | s   | F             | d <sub>1</sub> | D <sub>1</sub> | E     | dyn.               | stat.           | P <sub>W</sub>     | n <sub>D</sub><br>Grease    | n <sub>B</sub>    |        |
|             |           |                 |     |    |     |     |               |                |                |       | C <sub>W</sub>     | C <sub>0W</sub> | KN                 | min <sup>-1</sup>           | min <sup>-1</sup> | Kg     |
|             |           |                 |     |    | min |     |               |                |                |       | KN                 | KN              | KN                 |                             |                   |        |
| 20          | SL18 3004 | 20              | 42  | 16 | 0,6 | 1,5 | -             | 29             | 33             | 36,5  | 27,5               | 26,5            | 3,45               | 10.000                      | 9.000             | 0,11   |
|             | SL18 2204 | 20              | 47  | 18 | 1   | 1   | -             | 30             | 37             | 41,5  | 41                 | 37,5            | 4,75               | 9.500                       | 8.000             | 0,16   |
| 25          | SL18 3005 | 25              | 47  | 16 | 0,6 | 1,5 | -             | 34,5           | 38,5           | 42,5  | 31,5               | 32,5            | 4,3                | 9.000                       | 7.000             | 0,12   |
|             | SL18 2205 | 25              | 52  | 18 | 1   | 1   | -             | 35             | 42             | 46,5  | 46                 | 45              | 5,7                | 8.500                       | 6.500             | 0,18   |
|             | SL19 2305 | 25              | 62  | 24 | 1,1 | 2   | 31,72         | 36,5           | 47,5           | -     | 65                 | 60              | 7,3                | 7.500                       | 5.500             | 0,37   |
| 30          | SL18 3006 | 30              | 55  | 19 | 1   | 2   | -             | 40             | 45             | 49,5  | 40,5               | 43              | 5,6                | 7.500                       | 6.500             | 0,2    |
|             | SL18 2206 | 30              | 62  | 20 | 1   | 1   | -             | 42             | 50,5           | 55    | 63                 | 65              | 8,1                | 7.000                       | 5.500             | 0,3    |
|             | SL19 2306 | 30              | 72  | 27 | 1,1 | 2   | 38,3          | 43,5           | 56             | -     | 89                 | 88              | 10,7               | 6.500                       | 4.900             | 0,56   |
| 35          | SL18 3007 | 35              | 62  | 20 | 1   | 2   | -             | 45             | 51             | 55,5  | 49,5               | 55              | 7                  | 6.500                       | 6.000             | 0,26   |
|             | SL18 2207 | 35              | 72  | 23 | 1,1 | 1   | -             | 47             | 59             | 64    | 79                 | 79              | 9,8                | 6.000                       | 5.000             | 0,44   |
|             | SL19 2307 | 35              | 80  | 31 | 1,5 | 2   | 44,68         | 51             | 65,5           | -     | 113                | 112             | 13,9               | 5.500                       | 4.300             | 0,74   |
| 40          | SL18 3008 | 40              | 68  | 21 | 1   | 2   | -             | 50,5           | 57,5           | 61,5  | 59                 | 68              | 8,6                | 6.000                       | 5.000             | 0,31   |
|             | SL18 2208 | 40              | 80  | 23 | 1,1 | 1   | -             | 54             | 66             | 71    | 87                 | 83              | 11,4               | 5.500                       | 4.400             | 0,55   |
|             | SL19 2308 | 40              | 90  | 33 | 1,5 | 2   | 51,12         | 57,5           | 75             | -     | 152                | 156             | 19,1               | 5.000                       | 3.600             | 1,01   |
| 45          | SL18 3009 | 45              | 75  | 23 | 1   | 2   | -             | 55,5           | 62             | 66,5  | 63                 | 76              | 9,6                | 5.500                       | 5.000             | 0,4    |
|             | SL18 2209 | 45              | 85  | 23 | 1,1 | 1   | -             | 57,5           | 69,5           | 74,5  | 90                 | 99              | 12,3               | 5.000                       | 4.200             | 0,59   |
|             | SL19 2309 | 45              | 100 | 36 | 1,5 | 3   | 56,1          | 62,5           | 80             | -     | 162                | 172             | 21                 | 4.500                       | 3.700             | 1,37   |
| 50          | SL18 3010 | 50              | 80  | 23 | 1   | 2   | -             | 59             | 67,5           | 72    | 79                 | 96              | 12                 | 5.000                       | 4.500             | 0,43   |
|             | SL18 2210 | 50              | 90  | 23 | 1,1 | 1   | -             | 64,5           | 76,5           | 81,5  | 97                 | 113             | 14                 | 4.600                       | 3.600             | 0,64   |
|             | SL19 2310 | 50              | 110 | 40 | 2   | 3   | 60,72         | 68,5           | 89,5           | -     | 208                | 219             | 26,5               | 4.100                       | 3.400             | 1,81   |
| 55          | SL18 3011 | 55              | 90  | 26 | 1,1 | 2   | -             | 68,5           | 78,5           | 83,5  | 107                | 138             | 17                 | 4.500                       | 3.800             | 0,64   |
|             | SL18 2211 | 55              | 100 | 25 | 1,5 | 1,5 | -             | 70             | 83,5           | 89    | 125                | 150             | 18,4               | 4.200                       | 3.300             | 0,87   |
|             | SL19 2311 | 55              | 120 | 43 | 2   | 3   | 67,11         | 75,5           | 99             | -     | 242                | 255             | 31,5               | 3.700                       | 3.100             | 2,28   |
| 60          | SL18 2912 | 60              | 85  | 16 | 1   | 1   | -             | 69             | 74,5           | 78,5  | 57                 | 78              | 10,2               | 4.500                       | 3.500             | 0,29   |
|             | SL18 3012 | 60              | 95  | 26 | 1,1 | 2   | -             | 71,5           | 81,5           | 86,5  | 110                | 145             | 17,9               | 4.200                       | 3.600             | 0,69   |
|             | SL18 2212 | 60              | 110 | 28 | 1,5 | 1,5 | -             | 77             | 93             | 99    | 152                | 180             | 22,3               | 3.800                       | 3.100             | 1,18   |
|             | SL19 2312 | 60              | 130 | 46 | 2,1 | 3   | 73,62         | 82             | 105,5          | -     | 260                | 280             | 34,5               | 3.400                       | 2.900             | 2,88   |
| 65          | SL18 2913 | 65              | 90  | 16 | 1   | 1   | -             | 75,5           | 81             | 85    | 60                 | 86              | 11,2               | 4.200                       | 3.100             | 0,31   |
|             | SL18 3013 | 65              | 100 | 26 | 1,1 | 2   | -             | 78             | 88             | 93    | 116                | 159             | 19,7               | 3.900                       | 3.300             | 0,73   |
|             | SL18 2213 | 65              | 120 | 31 | 1,5 | 1,5 | -             | 82,5           | 100            | 106   | 178                | 214             | 26,5               | 3.500                       | 3.000             | 1,57   |
|             | SL19 2313 | 65              | 140 | 48 | 2,1 | 3,5 | 80,69         | 90             | 116,5          | -     | 315                | 355             | 42,5               | 3.200                       | 2.500             | 3,52   |
| 70          | SL18 2914 | 70              | 100 | 19 | 1   | 1   | -             | 81             | 87,5           | 92,5  | 79                 | 114             | 14,5               | 3.800                       | 3.100             | 0,49   |
|             | SL18 3014 | 70              | 110 | 30 | 1,1 | 3   | -             | 81,5           | 95             | 100   | 137                | 176             | 21,7               | 3.600                       | 3.400             | 1,02   |
|             | SL18 2214 | 70              | 125 | 31 | 1,5 | 1,5 | -             | 87             | 105            | 111   | 184                | 227             | 28                 | 3.300                       | 2.800             | 1,66   |
|             | SL19 2314 | 70              | 150 | 51 | 2,1 | 3,5 | 84,14         | 93,5           | 121,5          | -     | 345                | 390             | 46,5               | 2.900                       | 2.400             | 4,33   |
| 75          | SL18 2915 | 75              | 105 | 19 | 1   | 1   | -             | 86             | 93             | 97,5  | 81                 | 121             | 15,4               | 3.600                       | 2.900             | 0,52   |
|             | SL18 3015 | 75              | 115 | 30 | 1,1 | 3   | -             | 89             | 102,5          | 107,5 | 145                | 194             | 23,8               | 3.400                       | 3.000             | 1,06   |
|             | SL18 2215 | 75              | 130 | 31 | 1,5 | 1,5 | -             | 91,5           | 110            | 116   | 190                | 241             | 29,5               | 3.200                       | 2.700             | 1,75   |
|             | SL19 2315 | 75              | 160 | 55 | 2,1 | 3,5 | 91,22         | 101,5          | 131,5          | -     | 410                | 475             | 55                 | 2.800                       | 2.100             | 5,3    |



SL19 23  
(Support bearings)



axial displacement "S"

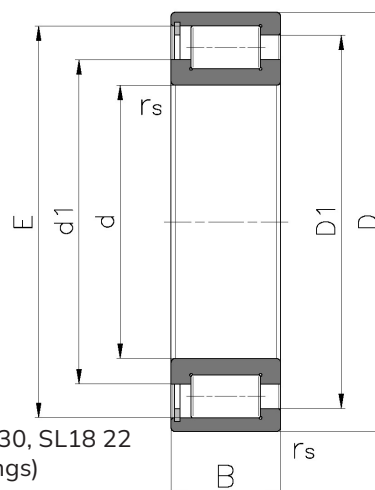
| Ø shafts | CODE      | Dimensions (mm) |     |    |     |     | Assembly dim. |                |                |       | Basic load ratings |                 | Fatigue load limit | Speed ratings <sup>1)</sup> | Speed ratings     | Weight |
|----------|-----------|-----------------|-----|----|-----|-----|---------------|----------------|----------------|-------|--------------------|-----------------|--------------------|-----------------------------|-------------------|--------|
|          |           | d               | D   | B  | rs  | s   | F             | d <sub>1</sub> | D <sub>1</sub> | E     | dyn.               | stat.           | P <sub>W</sub>     | n <sub>D</sub>              | n <sub>B</sub>    |        |
|          |           |                 |     |    |     |     |               |                |                |       | C <sub>W</sub>     | C <sub>0W</sub> | P <sub>W</sub>     | n <sub>D</sub>              | n <sub>B</sub>    |        |
|          |           |                 |     |    |     |     |               |                |                |       | KN                 | KN              | KN                 | min <sup>-1</sup>           | min <sup>-1</sup> |        |
|          |           |                 |     |    |     | min |               |                |                |       |                    |                 |                    |                             |                   | Kg     |
| 80       | SL18 2916 | 80              | 110 | 19 | 1   | 1   | -             | 91             | 98             | 102   | 84                 | 129             | 16,4               | 3.400                       | 2.700             | 0,55   |
|          | SL18 3016 | 80              | 125 | 34 | 1,1 | 4   | -             | 95             | 111            | 117   | 173                | 225             | 27,5               | 3.200                       | 3.000             | 1,43   |
|          | SL18 2216 | 80              | 140 | 33 | 2   | 1,5 | -             | 98,5           | 119            | 126   | 226                | 285             | 34                 | 2.900                       | 2.500             | 2,15   |
|          | SL19 2316 | 80              | 170 | 58 | 2,1 | 3,5 | 98,24         | 109,5          | 142            | -     | 480                | 560             | 63                 | 2.600                       | 1.900             | 6,32   |
| 85       | SL18 2917 | 85              | 120 | 22 | 1,1 | 1   | -             | 96             | 105            | 109   | 105                | 162             | 20,2               | 3.200                       | 2.700             | 0,81   |
|          | SL18 3017 | 85              | 130 | 34 | 1,1 | 4   | -             | 99,5           | 115,5          | 121   | 178                | 237             | 29                 | 3.000                       | 2.800             | 1,51   |
|          | SL18 2217 | 85              | 150 | 36 | 2   | 1,5 | -             | 104,5          | 126            | 133   | 255                | 325             | 38,5               | 2.800                       | 2.400             | 2,74   |
|          | SL19 2317 | 85              | 180 | 60 | 3   | 4   | 107,01        | 118            | 150,5          | -     | 510                | 620             | 67                 | 2.400                       | 1.700             | 7,34   |
| 90       | SL18 2918 | 90              | 125 | 22 | 1,1 | 1   | -             | 102            | 110,5          | 115   | 109                | 172             | 21,2               | 3.000                       | 2.500             | 0,84   |
|          | SL18 3018 | 90              | 140 | 37 | 1,5 | 4   | -             | 106            | 124            | 130   | 208                | 280             | 33,5               | 2.800                       | 2.700             | 1,97   |
|          | SL18 2218 | 90              | 160 | 40 | 2   | 2,5 | -             | 110            | 133            | 140,5 | 290                | 370             | 43                 | 2.600                       | 2.100             | 3,48   |
|          | SL19 2318 | 90              | 190 | 64 | 3   | 4   | 105,26        | 117            | 152            | -     | 560                | 660             | 72                 | 2.300                       | 1.800             | 8,83   |
| 95       | SL18 2919 | 95              | 130 | 22 | 1,1 | 1   | -             | 106,5          | 117            | 122   | 118                | 179             | 21,7               | 2.900                       | 2.400             | 0,86   |
|          | SL18 2219 | 95              | 170 | 43 | 2,1 | 2,5 | -             | 122            | 147            | 155,5 | 340                | 435             | 49                 | 2.400                       | 2.000             | 4,17   |
|          | SL19 2319 | 95              | 200 | 67 | 3   | 4   | 114,66        | 126,5          | 161,5          | -     | 580                | 720             | 77                 | 2.200                       | 1.700             | 10,2   |
| 100      | SL18 2920 | 100             | 140 | 24 | 1,1 | 1,5 | -             | 113,5          | 125,5          | 130   | 136                | 206             | 24,3               | 2.700                       | 2.300             | 1,14   |
|          | SL18 3020 | 100             | 150 | 37 | 1,5 | 4   | -             | 115,5          | 133,5          | 139   | 219                | 310             | 35,5               | 2.600                       | 2.400             | 2,15   |
|          | SL18 2220 | 100             | 180 | 46 | 2,1 | 2,5 | -             | 127,5          | 154            | 163   | 395                | 520             | 58                 | 2.300                       | 1.800             | 5,13   |
|          | SL19 2320 | 100             | 215 | 73 | 3   | 4   | 119,3         | 132,5          | 172,5          | -     | 710                | 860             | 91                 | 2.100                       | 1.500             | 13     |
| 110      | SL18 2922 | 110             | 150 | 24 | 1,1 | 1,5 | -             | 124            | 136            | 141   | 140                | 220             | 26                 | 2.500                       | 2.100             | 1,23   |
|          | SL18 3022 | 110             | 170 | 45 | 2   | 5,5 | -             | 127,5          | 149            | 156   | 285                | 395             | 45                 | 2.300                       | 2.200             | 3,5    |
|          | SL18 2222 | 110             | 200 | 53 | 2,1 | 4   | -             | 137            | 167            | 177   | 455                | 590             | 64                 | 2.100                       | 1.800             | 7,24   |
|          | SL19 2322 | 110             | 240 | 80 | 3   | 5   | 134,3         | 151            | 199,5          | -     | 850                | 980             | 99                 | 1.900                       | 1.300             | 17     |
| 120      | SL18 2924 | 120             | 165 | 27 | 1,1 | 1,5 | -             | 135            | 148,5          | 154   | 180                | 295             | 33,5               | 2.300                       | 1.900             | 1,73   |
|          | SL18 3024 | 120             | 180 | 46 | 2   | 5,5 | -             | 139            | 160,5          | 167   | 300                | 435             | 48                 | 2.200                       | 1.900             | 3,8    |
|          | SL18 2224 | 120             | 215 | 58 | 2,1 | 4   | -             | 150,5          | 182            | 192,5 | 540                | 730             | 77                 | 1.900                       | 1.500             | 9,08   |
|          | SL19 2324 | 120             | 260 | 86 | 3   | 5   | 147,4         | 164            | 213            | -     | 1.000              | 1.240           | 123                | 1.700                       | 1.200             | 22,3   |
| 130      | SL18 2926 | 130             | 180 | 30 | 1,5 | 2   | -             | 146            | 161            | 166   | 214                | 355             | 39,5               | 2.100                       | 1.800             | 2,33   |
|          | SL18 3026 | 130             | 200 | 52 | 2   | 5,5 | -             | 148,5          | 175            | 183   | 435                | 620             | 65                 | 2.000                       | 1.700             | 5,65   |
|          | SL18 2326 | 130             | 230 | 64 | 3   | 5   | -             | 162,5          | 196            | 207   | 630                | 860             | 89                 | 1.800                       | 1.400             | 11,25  |
| 140      | SL18 2928 | 140             | 190 | 30 | 1,5 | 2   | -             | 157            | 173,5          | 179   | 232                | 385             | 41,5               | 2.000                       | 1.600             | 2,42   |
|          | SL18 3028 | 140             | 210 | 53 | 2   | 5,5 | -             | 162,5          | 189            | 197   | 455                | 680             | 70                 | 1.900                       | 1.500             | 6,04   |
|          | SL18 2228 | 140             | 250 | 68 | 3   | 5   | -             | 174            | 210            | 222   | 720                | 1.020           | 102                | 1.700                       | 1.300             | 14,47  |
| 150      | SL18 3030 | 150             | 210 | 36 | 2   | 2,5 | -             | 169            | 189            | 196   | 305                | 490             | 52                 | 1.800                       | 1.500             | 3,77   |
|          | SL18 2230 | 150             | 225 | 56 | 2,1 | 7   | -             | 170            | 197,5          | 206   | 480                | 710             | 72                 | 1.700                       | 1.500             | 7,33   |
|          | SL18 2930 | 150             | 270 | 73 | 3   | 6   | -             | 185,5          | 224            | 237   | 830                | 1.180           | 116                | 1.500                       | 1.200             | 18,43  |
| 160      | SL18 2932 | 160             | 220 | 36 | 2   | 2,5 | -             | 180            | 200            | 207   | 320                | 520             | 54                 | 1.700                       | 1.300             | 4      |
|          | SL18 3032 | 160             | 240 | 60 | 2,1 | 7   | -             | 185            | 215            | 224   | 550                | 820             | 81                 | 1.600                       | 1.300             | 8,8    |
|          | SL18 2232 | 160             | 290 | 80 | 3   | 6   | -             | 208,5          | 252            | 266,5 | 1.030              | 1.490           | 140                | 1.400                       | 950               | 23     |

# DIMENSIONAL TABLES

**DISTITEC**

Full complement cylindrical roller bearings,  
single row

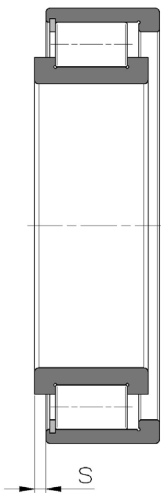
Support bearings:  
SL18 29, SL 1830, SL18 22 Series  
SL19 23 Series



| Ø<br>shafts | CODE      | Dimensions (mm) |     |     |                |     | Assembly dim.  |                |       | Basic load ratings |                 | Fatigue load limit | Speed ratings <sup>1)</sup> | Speed ratings     | Weight<br>Kg |
|-------------|-----------|-----------------|-----|-----|----------------|-----|----------------|----------------|-------|--------------------|-----------------|--------------------|-----------------------------|-------------------|--------------|
|             |           | d               | D   | B   | r <sub>s</sub> | s   | d <sub>1</sub> | D <sub>1</sub> | E     | dyn.               | stat.           | P <sub>W</sub>     | n <sub>D</sub><br>Grease    | n <sub>B</sub>    |              |
|             |           |                 |     |     |                |     |                |                |       | C <sub>W</sub>     | C <sub>0W</sub> | KN                 | min <sup>-1</sup>           | min <sup>-1</sup> |              |
|             |           |                 |     |     | min            |     |                |                |       | KN                 | KN              | KN                 |                             |                   |              |
| 170         | SL18 2934 | 170             | 230 | 36  | 2              | 2,5 | 191            | 210,5          | 218   | 330                | 560             | 57                 | 1.600                       | 1.200             | 4,3          |
|             | SL18 3034 | 170             | 260 | 67  | 2,1            | 7   | 198            | 231,5          | 242   | 710                | 1.070           | 104                | 1.500                       | 1.100             | 12,2         |
|             | SL18 2234 | 170             | 310 | 86  | 3              | 7   | 220,5          | 266            | 281   | 1.150              | 1.680           | 155                | 1.400                       | 900               | 28,65        |
| 180         | SL18 2936 | 180             | 250 | 42  | 2              | 2,5 | 201            | 223,5          | 231   | 410                | 690             | 69                 | 1.500                       | 1.200             | 6,2          |
|             | SL18 3036 | 180             | 280 | 74  | 2,1            | 7   | 212            | 248            | 260   | 820                | 1.260           | 119                | 1.400                       | 1.000             | 16,1         |
|             | SL18 2236 | 180             | 320 | 86  | 4              | 7   | 232,5          | 278            | 293   | 1.190              | 1.780           | 163                | 1.300                       | 850               | 29,8         |
| 190         | SL18 2938 | 190             | 260 | 42  | 2              | 2,5 | 211,5          | 235            | 243   | 455                | 790             | 77                 | 1.400                       | 1.100             | 6,5          |
|             | SL18 3038 | 190             | 290 | 75  | 2,1            | 9   | 222            | 258            | 269   | 840                | 1.320           | 124                | 1.400                       | 1.000             | 17           |
|             | SL18 2238 | 190             | 340 | 92  | 4              | 9   | 243,5          | 294            | 310,5 | 1.310              | 1.920           | 172                | 1.200                       | 800               | 35,65        |
| 200         | SL18 1840 | 200             | 250 | 24  | 1,5            | 2   | 217            | 231            | 237   | 183                | 330             | 34                 | 1.400                       | 1.200             | 2,57         |
|             | SL18 2940 | 200             | 280 | 48  | 2,1            | 3   | 225,5          | 252            | 261   | 550                | 960             | 91                 | 1.400                       | 1.000             | 9,1          |
|             | SL18 3040 | 200             | 310 | 82  | 2,1            | 9   | 236,5          | 275            | 287   | 960                | 1.530           | 140                | 1.300                       | 900               | 21,8         |
|             | SL18 2240 | 200             | 360 | 98  | 4              | 9   | 246,5          | 300,5          | 318,5 | 1.420              | 2.040           | 183                | 1.200                       | 800               | 43,12        |
| 220         | SL18 1844 | 220             | 270 | 24  | 1,5            | 2   | 237,5          | 251,5          | 258   | 192                | 365             | 36                 | 1.300                       | 1.000             | 2,8          |
|             | SL18 2944 | 220             | 300 | 48  | 2,1            | 3   | 246,5          | 273            | 282   | 580                | 1.050           | 97                 | 1.200                       | 850               | 9,9          |
|             | SL18 3044 | 220             | 340 | 90  | 3              | 9   | 254,5          | 298            | 312   | 1.160              | 1.840           | 164                | 1.200                       | 850               | 28,4         |
| 240         | SL18 1848 | 240             | 300 | 28  | 2              | 3   | 260            | 276            | 282   | 224                | 435             | 41,5               | 1.200                       | 950               | 4,4          |
|             | SL18 2948 | 240             | 320 | 48  | 2,1            | 3   | 267,5          | 294            | 303   | 610                | 1.140           | 103                | 1.200                       | 750               | 10,6         |
|             | SL18 3048 | 240             | 360 | 92  | 3              | 11  | 277,5          | 320,5          | 335   | 1.220              | 2.010           | 176                | 1.100                       | 750               | 30,9         |
| 260         | SL18 1852 | 260             | 320 | 28  | 2              | 3   | 282,5          | 298,5          | 304   | 234                | 475             | 44                 | 1.100                       | 850               | 4,71         |
|             | SL18 2952 | 260             | 360 | 60  | 2,1            | 3,5 | 291,5          | 322,5          | 333   | 790                | 1.470           | 129                | 1.000                       | 700               | 18,5         |
|             | SL18 3052 | 260             | 400 | 104 | 4              | 11  | 304            | 358            | 376   | 1.620              | 2.550           | 217                | 1.000                       | 650               | 44,5         |
| 280         | SL18 1856 | 280             | 350 | 33  | 2              | 3   | 304,5          | 324,5          | 332   | 315                | 620             | 57                 | 1.000                       | 800               | 7            |
|             | SL18 2956 | 280             | 380 | 60  | 2,1            | 3,5 | 314            | 347,5          | 358   | 920                | 1.740           | 149                | 1.000                       | 600               | 19,7         |
|             | SL18 3056 | 280             | 420 | 106 | 4              | 11  | 319,5          | 372,5          | 391   | 1.670              | 2.700           | 225                | 950                         | 600               | 48           |
| 300         | SL18 1860 | 300             | 380 | 38  | 2,1            | 3,5 | 328            | 351            | 358   | 380                | 750             | 67                 | 950                         | 700               | 10           |
|             | SL18 2960 | 300             | 420 | 72  | 3              | 5   | 338            | 376,5          | 389   | 1.180              | 2.230           | 186                | 900                         | 550               | 31,2         |
|             | SL18 3060 | 300             | 460 | 118 | 4              | 14  | 353,5          | 413,5          | 433   | 2.040              | 3.350           | 270                | 850                         | 500               | 66,6         |
| 320         | SL18 1864 | 320             | 400 | 38  | 2,1            | 4,5 | 346            | 369            | 377   | 390                | 800             | 69                 | 900                         | 650               | 10,6         |
|             | SL18 2964 | 320             | 440 | 72  | 3              | 5   | 358,5          | 397            | 410   | 1.220              | 2.370           | 194                | 850                         | 500               | 32,9         |
|             | SL18 3064 | 320             | 480 | 121 | 4              | 14  | 369,5          | 429,5          | 449   | 2.100              | 3.500           | 280                | 800                         | 500               | 71,7         |
| 340         | SL18 1868 | 340             | 420 | 38  | 2,1            | 4,5 | 364,5          | 387            | 395   | 405                | 840             | 72                 | 850                         | 650               | 11,2         |
|             | SL18 2968 | 340             | 460 | 72  | 3              | 5   | 379            | 417,5          | 430   | 1.260              | 2.500           | 202                | 800                         | 480               | 34,7         |
|             | SL18 3068 | 340             | 520 | 133 | 5              | 16  | 396            | 463,5          | 485   | 2.500              | 4.150           | 330                | 750                         | 450               | 95,8         |
| 360         | SL18 1872 | 360             | 440 | 38  | 2,1            | 4,5 | 388,5          | 411,5          | 419   | 426                | 890             | 75                 | 800                         | 550               | 11,7         |
|             | SL18 2972 | 360             | 480 | 72  | 3              | 5   | 399,5          | 438            | 450   | 1.290              | 2.650           | 211                | 750                         | 440               | 36,4         |
|             | SL18 3072 | 360             | 540 | 134 | 5              | 16  | 414            | 481            | 503   | 2.550              | 4.350           | 340                | 700                         | 430               | 101          |

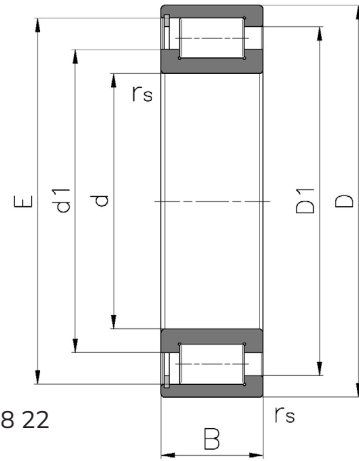
Full complement cylindrical roller bearings,  
double row

Support bearings:  
SL18 29, SL 1830, SL18 22 Series  
SL19 23 Series



Axial displacement "S"

| Ø<br>shafts | CODE        | Dimensions (mm) |       |     |     |    | Assembly dim.<br>(mm) |                |     | Basic load<br>ratings  |                          | Fatigue<br>load<br>limit | Speed<br>ratings <sup>1)</sup> | Speed<br>ratings<br>ref. | Weight<br><br>Kg |
|-------------|-------------|-----------------|-------|-----|-----|----|-----------------------|----------------|-----|------------------------|--------------------------|--------------------------|--------------------------------|--------------------------|------------------|
|             |             | d               | D     | B   | rs  | s  | d <sub>1</sub>        | D <sub>1</sub> | E   | dyn.<br>C <sub>W</sub> | stat.<br>C <sub>0W</sub> | P <sub>W</sub>           | n <sub>D</sub><br>Grease       | n <sub>B</sub>           |                  |
|             |             |                 |       |     |     |    |                       |                |     |                        |                          |                          |                                |                          |                  |
|             |             |                 |       |     | min |    |                       |                |     | KN                     | KN                       | KN                       | min <sup>-1</sup>              | min <sup>-1</sup>        |                  |
| 380         | SL18 1876   | 380             | 480   | 46  | 2,1 | 6  | 414,5                 | 443            | 453 | 590                    | 1.190                    | 99                       | 750                            | 550                      | 19,2             |
|             | SL18 2976   | 380             | 520   | 82  | 4   | 5  | 426                   | 471,5          | 486 | 1.670                  | 3.350                    | 260                      | 700                            | 400                      | 52,1             |
|             | SL18 3076   | 380             | 560   | 135 | 5   | 16 | 431,5                 | 499            | 521 | 2.600                  | 4.500                    | 355                      | 700                            | 410                      | 106              |
| 400         | SL18 1880   | 400             | 500   | 46  | 2,1 | 6  | 437                   | 466            | 476 | 600                    | 1.260                    | 103                      | 700                            | 490                      | 20               |
|             | SL18 2980   | 400             | 540   | 82  | 4   | 5  | 450                   | 495,5          | 511 | 1.730                  | 3.560                    | 275                      | 700                            | 370                      | 54,3             |
|             | SL18 3080   | 400             | 600   | 148 | 5   | 18 | 462,5                 | 534,5          | 558 | 3.100                  | 5.400                    | 415                      | 650                            | 360                      | 140              |
| 420         | SL18 1884   | 420             | 520   | 46  | 2,1 | 6  | 452,5                 | 481,5          | 491 | 620                    | 1.310                    | 106                      | 700                            | 470                      | 20,9             |
|             | SL18 2984   | 420             | 560   | 82  | 4   | 5  | 462                   | 507,5          | 523 | 1.750                  | 3.600                    | 280                      | 650                            | 360                      | 56,9             |
|             | SL18 3084   | 420             | 620   | 150 | 6   | 18 | 482                   | 553            | 577 | 2.750                  | 3.150                    | 450                      | 550                            | 330                      | 147              |
| 440         | SL18 1888   | 440             | 540   | 46  | 2,1 | 6  | 475,5                 | 504            | 514 | 630                    | 1.380                    | 110                      | 650                            | 440                      | 21,8             |
|             | SL18 2988   | 440             | 600   | 95  | 4   | 7  | 490                   | 544            | 562 | 2.110                  | 4.150                    | 315                      | 600                            | 330                      | 78,1             |
|             | SL18 3088   | 440             | 65    | 157 | 8   | 18 | 503                   | 583,5          | 611 | 3.250                  | 3.700                    | 500                      | 500                            | 300                      | 167              |
| 460         | SL18 1892   | 460             | 580   | 56  | 3   | 7  | 501                   | 534,5          | 546 | 790                    | 1.680                    | 133                      | 600                            | 420                      | 33,9             |
|             | SL18 2992   | 460             | 620   | 95  | 4   | 7  | 504                   | 559            | 576 | 2.140                  | 4.300                    | 320                      | 600                            | 320                      | 81,1             |
|             | SL18 3092   | 460             | 680   | 163 | 8   | 21 | 525                   | 605            | 633 | 3.350                  | 3.850                    | 560                      | 450                            | 270                      | 192              |
| 480         | SL18 1896   | 480             | 600   | 56  | 3   | 7  | 519                   | 552,5          | 564 | 810                    | 1.740                    | 136                      | 600                            | 400                      | 35,2             |
|             | SL18 2996   | 480             | 650   | 100 | 5   | 7  | 538                   | 596            | 614 | 2.410                  | 4.850                    | 355                      | 550                            | 290                      | 94,7             |
|             | SL18 3096   | 480             | 700   | 165 | 8   | 21 | 546,5                 | 627            | 654 | 3.400                  | 4.000                    | 640                      | 400                            | 250                      | 200              |
| 500         | SL18 18/500 | 500             | 620   | 56  | 3   | 7  | 545,5                 | 579,5          | 591 | 830                    | 1.830                    | 141                      | 600                            | 380                      | 36,5             |
|             | SL18 29/500 | 500             | 670   | 100 | 5   | 7  | 553                   | 611            | 630 | 2.450                  | 5.000                    | 365                      | 550                            | 280                      | 98,3             |
|             | SL18 30/500 | 500             | 720   | 167 | 8   | 21 | 568                   | 648,5          | 676 | 3.500                  | 4.150                    | 700                      | 400                            | 220                      | 209              |
| 530         | SL18 18/530 | 530             | 650   | 56  | 4   | 7  | 572,5                 | 605,5          | 617 | 870                    | 1.900                    | 146                      | 550                            | 360                      | 38,4             |
|             | SL18 29/530 | 530             | 710   | 106 | 6   | 8  | 589                   | 652            | 674 | 2.360                  | 2.900                    | 369                      | 530                            | 380                      | 113              |
| 560         | SL18 18/560 | 560             | 680   | 56  | 4   | 7  | 599,5                 | 632            | 644 | 900                    | 2.000                    | 150                      | 540                            | 340                      | 40,4             |
|             | SL18 29/560 | 560             | 750   | 112 | 6   | 8  | 623                   | 686            | 708 | 2.430                  | 3.050                    | 380                      | 520                            | 360                      | 134              |
| 600         | SL18 18/600 | 600             | 730   | 60  | 4   | 7  | 642                   | 677            | 690 | 1.020                  | 1.830                    | 170                      | 500                            | 320                      | 50,5             |
|             | SL18 29/600 | 600             | 800   | 118 | 6   | 8  | 664                   | 729            | 752 | 2.900                  | 3.800                    | 453                      | 500                            | 330                      | 164              |
| 630         | SL18 18/630 | 630             | 780   | 69  | 5   | 9  | 679                   | 721            | 736 | 1.300                  | 2.870                    | 217                      | 470                            | 300                      | 70,8             |
|             | SL18 29/630 | 630             | 850   | 128 | 8   | 9  | 697                   | 772            | 799 | 3.200                  | 4.000                    | 500                      | 480                            | 320                      | 200              |
| 670         | SL18 18/670 | 670             | 820   | 69  | 5   | 9  | 724,5                 | 767            | 782 | 1.370                  | 3.050                    | 228                      | 440                            | 280                      | 74,5             |
|             | SL18 29/670 | 670             | 900   | 136 | 8   | 9  | 738                   | 813            | 840 | 3.750                  | 5.000                    | 586                      | 460                            | 300                      | 245              |
| 710         | SL18 18/710 | 710             | 870   | 74  | 5   | 11 | 765                   | 809,5          | 826 | 1.500                  | 3.400                    | 250                      | 420                            | 270                      | 90,6             |
|             | SL18 29/710 | 710             | 950   | 140 | 8   | 10 | 784                   | 869            | 899 | 4.000                  | 5.100                    | 625                      | 440                            | 280                      | 267              |
| 750         | SL18 18/750 | 750             | 920   | 78  | 6   | 11 | 805                   | 852            | 869 | 1.670                  | 3.800                    | 278                      | 390                            | 250                      | 108              |
|             | SL18 29/750 | 750             | 1.000 | 145 | 8   | 10 | 830                   | 915            | 944 | 4.100                  | 5.300                    | 641                      | 420                            | 270                      | 305              |
| 800         | SL18 18/800 | 800             | 980   | 82  | 6   | 12 | 858,5                 | 908            | 926 | 1.850                  | 4.300                    | 308                      | 370                            | 240                      | 128              |
|             | SL18 29/800 | 800             | 1.060 | 150 | 8   | 10 | 876                   | 961            | 990 | 4.750                  | 6.500                    | 742                      | 400                            | 250                      | 362              |



SL18 29, SL18 30, SL18 22  
(Support bearings)

| Ø<br>shafts | CODE         | Dimensions (mm) |       |     |    |      | Assembly dim.<br>(mm) |                |       | Basic load ratings     |                          | Fatigue load limit | Speed ratings <sup>1)</sup>                   | Speed ratings                               | Weight<br>Kg |
|-------------|--------------|-----------------|-------|-----|----|------|-----------------------|----------------|-------|------------------------|--------------------------|--------------------|-----------------------------------------------|---------------------------------------------|--------------|
|             |              | d               | D     | B   | rs | s    | d <sub>1</sub>        | D <sub>1</sub> | E     | dyn.<br>C <sub>w</sub> | stat.<br>C <sub>0w</sub> | P <sub>w</sub>     | n <sub>D</sub><br>Grease<br>min <sup>-1</sup> | ref.<br>n <sub>B</sub><br>min <sup>-1</sup> |              |
|             |              | min             |       |     |    |      |                       |                |       | KN                     | KN                       | KN                 |                                               |                                             |              |
| 850         | SL18 18/850  | 850             | 1.030 | 82  | 6  | 12   | 912                   | 961,5          | 979   | 1.900                  | 4.600                    | 317                | 350                                           | 220                                         | 135          |
|             | SL18 29/850  | 850             | 1.120 | 155 | 8  | 13   | 945                   | 1.029          | 1.059 | 4.850                  | 6.900                    | 758                | 380                                           | 240                                         | 411          |
| 900         | SL18 18/900  | 900             | 1.090 | 85  | 6  | 12   | 963                   | 1.016          | 1.035 | 2.050                  | 4.850                    | 342                | 320                                           | 210                                         | 157          |
|             | SL18 29/900  | 900             | 1.180 | 165 | 8  | 13   | 997                   | 1.087          | 1.118 | 5.300                  | 7.600                    | 828                | 360                                           | 220                                         | 475          |
| 950         | SL18 18/950  | 950             | 1.150 | 90  | 6  | 13,5 | 1.021                 | 1.073          | 1.092 | 2.150                  | 5.100                    | 358                | 300                                           | 200                                         | 185          |
|             | SL18 29/950  | 950             | 1.250 | 175 | 10 | 15   | 1.049                 | 1.144          | 1.177 | 5.800                  | 8.400                    | 906                | 340                                           | 210                                         | 572          |
| 1000        | SL18 18/1000 | 1.000           | 1.220 | 100 | 8  | 13,5 | 1.080                 | 1.141          | 1.163 | 2.700                  | 6.450                    | 450                | 280                                           | 190                                         | 237          |
|             | SL18 29/1000 | 1.000           | 1.320 | 185 | 10 | 15,0 | 1.115                 | 1.215          | 1.250 | 6.700                  | 9.700                    | 1.047              | 320                                           | 200                                         | 654          |



Full complement cylindrical roller bearings,  
double row

Support bearings:

SL18 50 Series

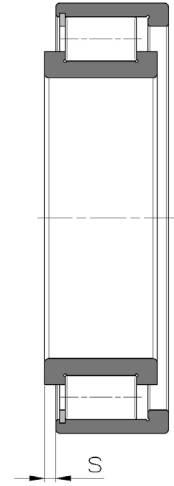
Fixed Bearings:

SL01 48, SL01 49 Series

Cuscinetti mobili:

SL02 49 Series

SL18 50  
(Support bearings)



| Ø shafts<br>mm | Support Bearing CODE | Fixed Bearing CODE | Floating Bearing CODE | CODE according to DIN 5412 | Dimensions (mm) |     |    |     |     | Assembly dim. (mm) |                |                |       | Basic load ratings |                            | Fatigue load limit<br>nG min-1 | Speed ratings ref.<br>nb min-1 | Weight<br>Kg |
|----------------|----------------------|--------------------|-----------------------|----------------------------|-----------------|-----|----|-----|-----|--------------------|----------------|----------------|-------|--------------------|----------------------------|--------------------------------|--------------------------------|--------------|
|                |                      |                    |                       |                            | d               | D   | B  | rs  | s   | C                  | d <sub>1</sub> | D <sub>1</sub> | E     | C dyn.<br>kN       | C <sub>0</sub> stat.<br>kN |                                |                                |              |
| 20             | SL18 5004            | -                  | -                     | -                          | 20              | 42  | 30 | 0,6 | 1   | 15                 | 29             | 33             | 36,5  | 47,5               | 53                         | 10.000                         | 9.000                          | 0,2          |
| 25             | SL18 5005            | -                  | -                     | -                          | 25              | 47  | 30 | 0,6 | 1   | 15                 | 34,5           | 38,5           | 42,5  | 54                 | 65                         | 9.000                          | 7.000                          | 0,23         |
| 30             | SL18 5006            | -                  | -                     | -                          | 30              | 55  | 34 | 1   | 1,5 | 17                 | 40             | 45,5           | 49,5  | 70                 | 86                         | 7.500                          | 6.500                          | 0,35         |
| 35             | SL18 5007            | -                  | -                     | -                          | 35              | 62  | 36 | 1   | 1,5 | 18                 | 45             | 51,5           | 55,5  | 85                 | 109                        | 6.500                          | 5.500                          | 0,46         |
| 40             | SL18 5008            | -                  | -                     | -                          | 40              | 68  | 38 | 1   | 1,5 | 19                 | 50,5           | 57,5           | 61,5  | 101                | 136                        | 6.000                          | 5.000                          | 0,56         |
| 45             | SL18 5009            | -                  | -                     | -                          | 45              | 75  | 40 | 1   | 1,5 | 20                 | 55,5           | 62,5           | 66,5  | 108                | 151                        | 5.500                          | 4.700                          | 0,71         |
| 50             | SL18 5010            | -                  | -                     | -                          | 50              | 80  | 40 | 1   | 1,5 | 20                 | 59             | 67,5           | 72    | 131                | 184                        | 5.000                          | 4.200                          | 0,76         |
| 55             | SL18 5011            | -                  | -                     | -                          | 55              | 90  | 46 | 1,1 | 1,5 | 23                 | 68,5           | 78,5           | 83,5  | 179                | 270                        | 4.500                          | 3.600                          | 1,16         |
| 60             | SL18 4912            | -                  | -                     | NNCF 4912 V                | 60              | 85  | 25 | 1   | 0,7 | 12,5               | 70,5           | 73,5           | 77    | 67                 | 115                        | 4.500                          | 3.200                          | 0,48         |
|                | -                    | SL01 4912          | -                     | NNC 4912 V                 | 60              | 85  | 25 | 1   | -   | 12,5               | 70,5           | 73,5           | -     | 67                 | 115                        | 4.500                          | 3.200                          | 0,49         |
|                | -                    | -                  | SL02 4912             | NNCL 4912 V                | 60              | 85  | 25 | 1   | 1   | 12,5               | 70,5           | -              | 77    | 67                 | 115                        | 4.500                          | 3.200                          | 0,47         |
|                | SL18 5012            | -                  | -                     | -                          | 60              | 95  | 46 | 1,1 | 1,5 | 23                 | 71,5           | 82             | 86,5  | 184                | 280                        | 4.200                          | 3.400                          | 1,24         |
| 65             | SL18 5013            | -                  | -                     | -                          | 65              | 100 | 46 | 1,1 | 1,5 | 23                 | 78             | 88             | 93    | 194                | 310                        | 3.900                          | 3.100                          | 1,32         |
| 70             | SL18 4914            | -                  | -                     | NNCF 4914 V                | 70              | 100 | 30 | 1   | 0,7 | 15                 | 83             | 87             | 91    | 103                | 178                        | 3.800                          | 2.800                          | 0,78         |
|                | -                    | SL01 4914          | -                     | NNC 4914 V                 | 70              | 100 | 30 | 1   | -   | 15                 | 83             | 87             | -     | 103                | 178                        | 3.800                          | 2.800                          | 0,78         |
|                | -                    | -                  | SL02 4914             | NNCL 4914 V                | 70              | 100 | 30 | 1   | 1   | 15                 | 83             | -              | 91    | 103                | 178                        | 3.800                          | 2.800                          | 0,75         |
|                | SL18 5014            | -                  | -                     | -                          | 70              | 110 | 54 | 1,1 | 3   | 27                 | 81,5           | 95             | 100   | 229                | 340                        | 3.600                          | 3.100                          | 1,85         |
| 75             | SL18 5015            | -                  | -                     | -                          | 75              | 115 | 54 | 1,1 | 3   | 27                 | 89             | 103            | 107,5 | 242                | 375                        | 3.400                          | 2.700                          | 1,93         |
| 80             | SL18 4916            | -                  | -                     | NNCF 4916 V                | 80              | 110 | 30 | 1   | 0,7 | 15                 | 92             | 96             | 100   | 109                | 199                        | 3.400                          | 2.500                          | 0,88         |
|                | -                    | SL01 4916          | -                     | NNC 4916 V                 | 80              | 110 | 30 | 1   | -   | 15                 | 92             | 96             | -     | 109                | 199                        | 3.400                          | 2.500                          | 0,88         |
|                | -                    | -                  | SL02 4916             | NNCL 4916 V                | 80              | 110 | 30 | 1   | 1   | 15                 | 92             | -              | 100   | 109                | 199                        | 3.400                          | 2.500                          | 0,85         |
|                | SL18 5016            | -                  | -                     | -                          | 80              | 125 | 60 | 1,1 | 3,5 | 30                 | 95             | 111            | 117   | 295                | 450                        | 3.200                          | 2.500                          | 2,59         |
| 85             | SL18 5017            | -                  | -                     | -                          | 85              | 130 | 60 | 1,1 | 3,5 | 30                 | 99,5           | 115,5          | 121   | 305                | 470                        | 3.000                          | 2.400                          | 2,72         |
| 90             | SL18 4918            | -                  | -                     | NNCF 4918 V                | 90              | 125 | 35 | 1,1 | 0,7 | 17,5               | 103            | 110            | 115   | 149                | 280                        | 3.000                          | 2.300                          | 1,35         |
|                | -                    | SL01 4918          | -                     | NNC 4918 V                 | 90              | 125 | 35 | 1,1 | -   | 17,5               | 103            | 110            | -     | 149                | 280                        | 3.000                          | 2.300                          | 1,35         |
|                | -                    | -                  | SL02 4918             | NNCL 4918 V                | 90              | 125 | 35 | 1,1 | 1,5 | 17,5               | 103            | -              | 115   | 149                | 280                        | 3.000                          | 2.300                          | 1,3          |
|                | SL18 5018            | -                  | -                     | -                          | 90              | 140 | 67 | 1,5 | 4   | 33,5               | 106,5          | 124            | 130   | 355                | 560                        | 2.800                          | 2.200                          | 3,62         |
| 100            | SL18 4920            | -                  | -                     | NNCF 4920 V                | 100             | 140 | 40 | 1,1 | 0,7 | 20                 | 116,5          | 124,5          | 129   | 191                | 370                        | 2.700                          | 2.000                          | 1,95         |
|                | -                    | SL01 4920          | -                     | NNC 4920V                  | 100             | 140 | 40 | 1,1 | -   | 20                 | 116,5          | 124,5          | -     | 191                | 370                        | 2.700                          | 2.000                          | 1,95         |
|                | -                    | -                  | SL02 4920             | NNCL 4920 V                | 100             | 140 | 40 | 1,1 | 2   | 20                 | 116,5          | -              | 129   | 191                | 370                        | 2.700                          | 2.000                          | 1,9          |
|                | SL18 5020            | -                  | -                     | -                          | 100             | 150 | 67 | 1,5 | 4   | 33,5               | 116            | 133,5          | 139   | 375                | 610                        | 2.600                          | 2.000                          | 3,94         |
| 110            | SL18 4922            | -                  | -                     | NNCF 4922 V                | 110             | 150 | 40 | 1,1 | 0,7 | 20                 | 125            | 133,5          | 138   | 198                | 400                        | 2.500                          | 1.800                          | 2,15         |
|                | -                    | SL01 4922          | -                     | NNC 4922 V                 | 110             | 150 | 40 | 1,1 | -   | 20                 | 125            | 133,5          | -     | 198                | 400                        | 2.500                          | 1.800                          | 2,15         |
|                | -                    | -                  | SL02 4922             | NNCL 4922 V                | 110             | 150 | 40 | 1,1 | 2   | 20                 | 125            | -              | 138   | 198                | 400                        | 2.500                          | 1.800                          | 2,1          |
|                | SL18 5022            | -                  | -                     | -                          | 110             | 170 | 80 | 2   | 5   | 40                 | 127,5          | 148,5          | 156   | 490                | 790                        | 2.300                          | 1.800                          | 6,32         |
| 120            | SL18 4924            | -                  | -                     | NNCF 4924 V                | 120             | 165 | 45 | 1,1 | 2   | 22,5               | 139            | 148            | 153   | 222                | 440                        | 2.300                          | 1.700                          | 2,95         |
|                | -                    | SL01 4924          | -                     | NNC 4924 V                 | 120             | 165 | 45 | 1,1 | -   | 22,5               | 139            | 148            | -     | 222                | 440                        | 2.300                          | 1.700                          | 2,95         |
|                | -                    | -                  | SL02 4924             | NNCL 4924 V                | 120             | 165 | 45 | 1,1 | 3   | 22,5               | 139            | -              | 153   | 222                | 440                        | 2.300                          | 1.700                          | 2,85         |
|                | SL18 5024            | -                  | -                     | -                          | 120             | 180 | 80 | 2   | 5   | 40                 | 139            | 160            | 167   | 520                | 870                        | 2.200                          | 1.600                          | 6,77         |

# DIMENSIONAL TABLES

**DISTITEC**

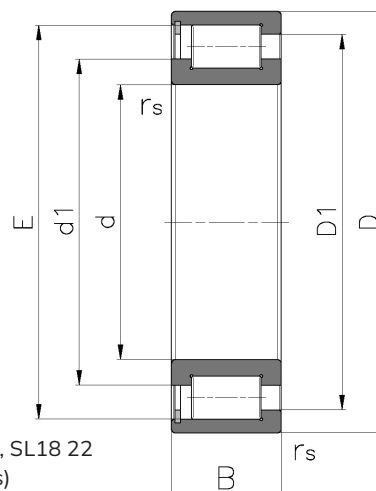
Full complement cylindrical roller bearings, one row

Support bearings:

SL18 29, SL 1830, Series

SL18 22

SL19 23 Series



SL18 29, SL18 30, SL18 22  
(Support bearings)

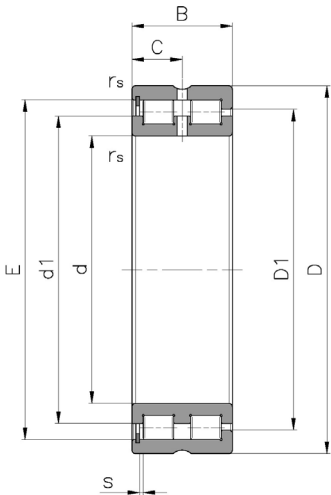
| Ø shafts<br>mm | Support Bearing CODE | Fixed Bearing CODE | Floating Bearing CODE | CODE according to DIN 5412 | Dimensions (mm) |     |     |     |   | Assembly dim. (mm) |                |                |     | Basic load ratings |                         | Fatigue load limit nG min-1 | Speed ratings ref. nb min-1 | Weight Kg |
|----------------|----------------------|--------------------|-----------------------|----------------------------|-----------------|-----|-----|-----|---|--------------------|----------------|----------------|-----|--------------------|-------------------------|-----------------------------|-----------------------------|-----------|
|                |                      |                    |                       |                            | d               | D   | B   | rs  | s | C                  | d <sub>1</sub> | D <sub>1</sub> | E   | dyn. C kN          | stat. C <sub>0</sub> kN |                             |                             |           |
|                |                      |                    |                       |                            |                 |     |     |     |   |                    |                |                |     |                    |                         |                             |                             |           |
| 130            | SL18 4926            | -                  | -                     | NNCF 4926 V                | 130             | 180 | 50  | 1,5 | 2 | 25                 | 149,5          | 159,5          | 165 | 260                | 510                     | 2.100                       | 1.500                       | 3,95      |
|                | -                    | SL01 4926          | -                     | NNC 4926 V                 | 130             | 180 | 50  | 1,5 | - | 25                 | 149,5          | 159,5          | -   | 260                | 510                     | 2.100                       | 1.500                       | 3,95      |
|                | -                    | -                  | SL02 4926             | NNCL 4926 V                | 130             | 180 | 50  | 1,5 | 4 | 25                 | 149,5          | -              | 165 | 260                | 510                     | 2.100                       | 1.500                       | 3,8       |
|                | SL18 5026            | -                  | -                     | -                          | 130             | 200 | 95  | 2   | 5 | 47,5               | 149            | 174,5          | 183 | 740                | 1.220                   | 2.000                       | 1.400                       | 10,2      |
| 140            | SL18 4928            | -                  | -                     | NNCF 4928 V                | 140             | 190 | 50  | 1,5 | 2 | 25                 | 160            | 170            | 176 | 270                | 550                     | 2.000                       | 1.400                       | 4,2       |
|                | -                    | SL01 4928          | -                     | NNC 4928 V                 | 140             | 190 | 50  | 1,5 | - | 25                 | 160            | 170            | -   | 270                | 550                     | 2.000                       | 1.400                       | 4,2       |
|                | -                    | -                  | SL02 4928             | NNCL 4928 V                | 140             | 190 | 50  | 1,5 | 4 | 25                 | 160            | -              | 176 | 270                | 550                     | 2.000                       | 1.400                       | 4,1       |
|                | SL18 5028            | -                  | -                     | -                          | 140             | 210 | 95  | 2   | 5 | 47,5               | 163            | 188,5          | 197 | 780                | 1.340                   | 1.900                       | 1.200                       | 11,1      |
| 150            | -                    | SL01 4830          | -                     | NNC 4830 V                 | 150             | 190 | 40  | 1,1 | - | 20                 | 166            | 173            | -   | 231                | 530                     | 1.900                       | 1.300                       | 2,9       |
|                | -                    | -                  | SL02 4830             | NNCL 4830 V                | 150             | 190 | 40  | 2   | 2 | 20                 | 166            | -              | 178 | 231                | 530                     | 1.900                       | 1.300                       | 2,8       |
|                | SL18 4930            | -                  | -                     | NNCF 4930 V                | 150             | 210 | 60  | 2   | 2 | 30                 | 171,5          | 186,5          | 192 | 410                | 820                     | 1.800                       | 1.200                       | 6,65      |
|                | -                    | SL01 4930          | -                     | NNC 4930 V                 | 150             | 210 | 60  | 2   | - | 30                 | 171,5          | 186,5          | -   | 410                | 820                     | 1.800                       | 1.200                       | 6,65      |
|                | -                    | -                  | SL02 4930             | NNCL 4930 V                | 150             | 210 | 60  | 2   | 4 | 30                 | 171,5          | -              | 192 | 410                | 820                     | 1.800                       | 1.200                       | 6,45      |
|                | SL18 5030            | -                  | -                     | -                          | 150             | 225 | 100 | 2,1 | 6 | 50                 | 170,5          | 197,5          | 206 | 810                | 1.400                   | 1.700                       | 1.200                       | 13,3      |
| 160            | -                    | SL01 4832          | -                     | NNC 4832 V                 | 160             | 200 | 40  | 1,1 | - | 20                 | 174            | 182            | -   | 237                | 560                     | 1.800                       | 1.300                       | 3,1       |
|                | -                    | -                  | SL02 4832             | NNCL 4832 V                | 160             | 200 | 40  | 1,1 | 2 | 20                 | 174            | -              | 186 | 237                | 560                     | 1.800                       | 1.200                       | 3         |
|                | SL18 4932            | -                  | -                     | NNCF 4932 V                | 160             | 220 | 60  | 2   | 2 | 30                 | 185            | 199,5          | 206 | 425                | 880                     | 1.700                       | 1.100                       | 7         |
|                | -                    | SL01 4932          | -                     | NNC 4932 V                 | 160             | 220 | 60  | 2   | - | 30                 | 185            | 199,5          | -   | 425                | 880                     | 1.700                       | 1.100                       | 7         |
|                | -                    | -                  | SL02 4932             | NNCL 4932 V                | 160             | 220 | 60  | 2   | 4 | 30                 | 185            | -              | 206 | 425                | 880                     | 1.700                       | 1.100                       | 6,8       |
|                | -                    | SL01 4834          | -                     | NNC 4834 V                 | 170             | 215 | 45  | 1,1 | - | 22,5               | 187            | 196            | -   | 260                | 600                     | 1.700                       | 1.200                       | 4,1       |
| 170            | -                    | -                  | SL02 4834             | NNCL 4834 V                | 170             | 215 | 45  | 1,1 | 3 | 22,5               | 187            | -              | 201 | 260                | 600                     | 1.700                       | 1.200                       | 3,95      |
|                | SL18 4934            | -                  | -                     | NNCF 4934 V                | 170             | 230 | 60  | 2   | 2 | 30                 | 194            | 208,5          | 215 | 435                | 930                     | 1.600                       | 1.000                       | 7,35      |
|                | -                    | SL01 4934          | -                     | NNC 4934 V                 | 170             | 230 | 60  | 2   | - | 30                 | 194            | 208,5          | -   | 435                | 930                     | 1.600                       | 1.000                       | 7,35      |
|                | -                    | -                  | SL02 4934             | NNCL 4934 V                | 170             | 230 | 60  | 2   | 4 | 30                 | 194            | -              | 215 | 435                | 930                     | 1.600                       | 1.000                       | 7,1       |
|                | -                    | SL01 4836          | -                     | NNC 4836 V                 | 180             | 225 | 45  | 1,1 | - | 22,5               | 200            | 208,5          | -   | 270                | 640                     | 1.600                       | 1.100                       | 4,3       |
|                | -                    | -                  | SL02 4836             | NNCL 4836 V                | 180             | 225 | 45  | 1,1 | 3 | 22,5               | 200            | -              | 214 | 270                | 640                     | 1.600                       | 1.100                       | 4,15      |
| 180            | SL18 4936            | -                  | -                     | NNCF 4936 V                | 180             | 250 | 69  | 2   | 3 | 34,5               | 206            | 223,5          | 230 | 570                | 1.200                   | 1.500                       | 950                         | 10,8      |
|                | -                    | -                  | -                     | NNC 4936 V                 | 180             | 250 | 69  | 2   | - | 34,5               | 206            | 223,5          | -   | 570                | 1.200                   | 1.500                       | 950                         | 10,8      |
|                | -                    | SL01 4936          | SL02 4936             | NNCL 4936 V                | 180             | 250 | 69  | 2   | 4 | 34,5               | 206            | -              | 230 | 570                | 1.200                   | 1.500                       | 950                         | 10,5      |
|                | -                    | SL01 4838          | -                     | NNC 4838 V                 | 190             | 240 | 50  | 1,5 | - | 25                 | 209            | 219            | -   | 310                | 730                     | 1.500                       | 1.100                       | 5,65      |
|                | -                    | -                  | SL02 4838             | NNCL 4838 V                | 190             | 240 | 50  | 1,5 | 4 | 25                 | 209            | -              | 225 | 310                | 730                     | 1.500                       | 1.100                       | 5,45      |
|                | SL18 4938            | -                  | -                     | NNCF 4938 V                | 190             | 260 | 69  | 2   | 3 | 34,5               | 216            | 233            | 240 | 580                | 1.270                   | 1.400                       | 900                         | 11,2      |
| 190            | -                    | SL01 4938          | -                     | NNC 4938 V                 | 190             | 260 | 69  | 2   | - | 34,5               | 216            | 233            | -   | 580                | 1.270                   | 1.400                       | 900                         | 11,2      |
|                | -                    | -                  | SL02 4938             | NNCL 4938 V                | 190             | 260 | 69  | 2   | 4 | 34,5               | 216            | -              | 240 | 580                | 1.270                   | 1.400                       | 900                         | 10,9      |
|                | -                    | SL01 4840          | -                     | NNC 4840 V                 | 200             | 250 | 50  | 1,5 | - | 25                 | 220            | 229,5          | -   | 320                | 770                     | 1.400                       | 1.000                       | 5,9       |
|                | -                    | -                  | SL02 4840             | NNCL 4840 V                | 200             | 250 | 50  | 1,5 | 4 | 25                 | 220            | -              | 235 | 320                | 770                     | 1.400                       | 1.000                       | 5,7       |
|                | SL18 4940            | -                  | -                     | NNCF 4940 V                | 200             | 280 | 80  | 2,1 | 4 | 40                 | 231            | 251,5          | 259 | 690                | 1.480                   | 1.400                       | 850                         | 15,8      |
|                | -                    | SL01 4940          | -                     | NNC 4940 V                 | 200             | 280 | 80  | 2,1 | - | 40                 | 231            | 251,5          | -   | 690                | 1.480                   | 1.400                       | 850                         | 15,8      |
| 200            | -                    | -                  | SL02 4940             | NNCL 4940 V                | 200             | 280 | 80  | 2,1 | 5 | 40                 | 231            | -              | 259 | 690                | 1.480                   | 1.400                       | 850                         | 15,3      |



DIMENSIONAL TABLES

Full complement cylindrical roller bearings,  
double row

Support bearings:  
SL18 50 Series  
Fixed Bearing :  
SL01 48, SL01 49 Series  
Floating Bearing :  
SL02 49 Series

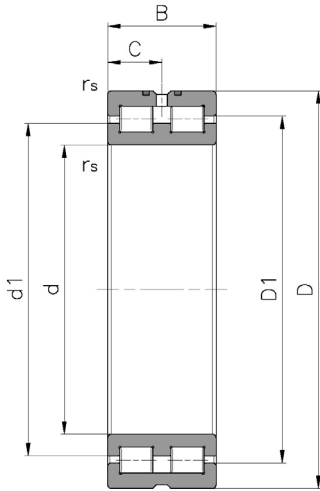


SL18 50  
(Support bearings)

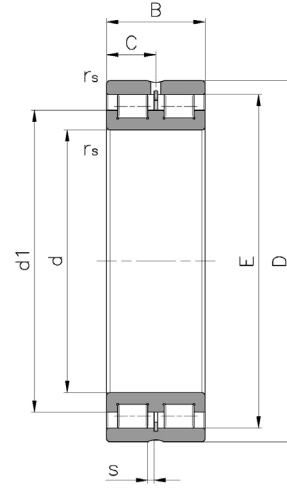
| Ø shafts<br><br>mm | Support Bearing CODE | Fixed Bearing CODE | Floating Bearing CODE | CODE according to DIN 5412 | Dimensions (mm) |     |     |     |   | Assembly dim. (mm) |       |       |     | Basic load ratings |          | Fatigue load limit<br>nG<br>min-1 | Speed ratings ref.<br>nb<br>min-1 | Weight<br>Kg |
|--------------------|----------------------|--------------------|-----------------------|----------------------------|-----------------|-----|-----|-----|---|--------------------|-------|-------|-----|--------------------|----------|-----------------------------------|-----------------------------------|--------------|
|                    |                      |                    |                       |                            | d               | D   | B   | rs  | s | C                  | d1    | D1    | E   | C<br>kN            | C0<br>kN |                                   |                                   |              |
| 220                | -                    | SL01 4844          | -                     | NNC 4844 V                 | 220             | 270 | 50  | 1,5 | - | 25                 | 241   | 250,5 | -   | 335                | 840      | 1.300                             | 850                               | 6,4          |
|                    | -                    | -                  | SL02 4844             | NNCL 4844 V                | 220             | 270 | 50  | 1,5 | 4 | 25                 | 241   | -     | 256 | 335                | 840      | 1.300                             | 850                               | 6,2          |
|                    | SL18 4944            | -                  | -                     | NNCF 4944 V                | 220             | 300 | 80  | 2,1 | 4 | 40                 | 248   | 268,5 | 276 | 720                | 1.590    | 1.200                             | 750                               | 17,2         |
|                    | -                    | SL01 4944          | -                     | NNC 4944 V                 | 220             | 300 | 80  | 2,1 | - | 40                 | 248   | 268,5 | -   | 720                | 1.590    | 1.200                             | 750                               | 17,2         |
|                    | -                    | -                  | SL02 4944             | NNCL 4944 V                | 220             | 300 | 80  | 2,1 | 5 | 40                 | 248   | -     | 276 | 720                | 1.590    | 1.200                             | 750                               | 16,7         |
| 240                | -                    | SL01 4848          | -                     | NNC 4848 V                 | 240             | 300 | 60  | 2   | - | 30                 | 261   | 275   | -   | 500                | 1.230    | 1.200                             | 750                               | 10           |
|                    | -                    | -                  | SL02 4848             | NNCL 4848 V                | 240             | 300 | 60  | 2   | 4 | 30                 | 261   | -     | 281 | 500                | 1.230    | 1.200                             | 750                               | 9,9          |
|                    | SL18 4948            | -                  | -                     | NNCF 4948 V                | 240             | 320 | 80  | 2,1 | 4 | 40                 | 271   | 291   | 299 | 740                | 1.710    | 1.200                             | 700                               | 18,5         |
|                    | -                    | SL01 4948          | -                     | NNC 4948 V                 | 240             | 320 | 80  | 2,1 | - | 40                 | 271   | 291   | -   | 740                | 1.710    | 1.200                             | 700                               | 18,5         |
|                    | -                    | -                  | SL02 4948             | NNCL 4948 V                | 240             | 320 | 80  | 2,1 | 5 | 40                 | 271   | -     | 299 | 740                | 1.710    | 1.200                             | 700                               | 17,9         |
| 260                | -                    | SL01 4852          | -                     | NNC 4852 V                 | 260             | 320 | 60  | 2   | - | 30                 | 283,5 | 297   | -   | 530                | 1.340    | 1.100                             | 700                               | 11           |
|                    | -                    | -                  | SL02 4852             | NNCL 4852 V                | 260             | 320 | 60  | 2   | 4 | 30                 | 283,5 | -     | 304 | 530                | 1.340    | 1.100                             | 700                               | 10,6         |
|                    | SL18 4952            | -                  | -                     | NNCF 4952 V                | 260             | 360 | 100 | 2,1 | 4 | 50                 | 295   | 321   | 331 | 1.110              | 2.490    | 1.000                             | 600                               | 32           |
|                    | -                    | SL01 4952          | -                     | NNC 4952 V                 | 260             | 360 | 100 | 2,1 | - | 50                 | 295   | 321   | -   | 1.110              | 2.490    | 1.000                             | 600                               | 32           |
|                    | -                    | -                  | SL02 4952             | NNCL 4952 V                | 260             | 360 | 100 | 2,1 | 6 | 50                 | 295   | -     | 331 | 1.110              | 2.490    | 1.000                             | 600                               | 31,2         |
| 280                | -                    | SL01 4856          | -                     | NNC 4856 V                 | 280             | 350 | 69  | 2   | - | 34,5               | 308   | 326   | -   | 690                | 1.790    | 1.000                             | 600                               | 16           |
|                    | -                    | -                  | SL02 4856             | NNCL 4856 V                | 280             | 350 | 69  | 2   | 4 | 34,5               | 308   | -     | 332 | 690                | 1.790    | 1.000                             | 600                               | 15,6         |
|                    | SL18 4956            | -                  | -                     | NNCF 4956 V                | 280             | 380 | 100 | 2,1 | 4 | 50                 | 317   | 343   | 353 | 1.150              | 2.700    | 1.000                             | 550                               | 34           |
|                    | -                    | SL01 4956          | -                     | NNC 4956 V                 | 280             | 380 | 100 | 2,1 | - | 50                 | 317   | 343   | -   | 1.150              | 2.700    | 1.000                             | 550                               | 34           |
|                    | -                    | -                  | SL02 4956             | NNCL 4956 V                | 280             | 380 | 100 | 2,1 | 6 | 50                 | 317   | -     | 353 | 1.150              | 2.700    | 1.000                             | 550                               | 33,1         |
| 300                | -                    | SL01 4860          | -                     | NNC 4860 V                 | 300             | 380 | 80  | 2,1 | - | 40                 | 329   | 349   | -   | 820                | 2.090    | 950                               | 550                               | 23           |
|                    | -                    | -                  | SL02 4860             | NNCL 4860 V                | 300             | 380 | 80  | 2,1 | 6 | 40                 | 329   | -     | 356 | 820                | 2.090    | 950                               | 550                               | 22           |
|                    | SL18 4960            | -                  | -                     | NNCF 4960 V                | 300             | 420 | 118 | 3   | 4 | 59                 | 341,5 | 374   | 385 | 1.650              | 3.800    | 900                               | 460                               | 53           |
|                    | -                    | SL01 4960          | -                     | NNC 4960 V                 | 300             | 420 | 118 | 3   | - | 59                 | 341,5 | 374   | -   | 1.650              | 3.800    | 900                               | 460                               | 53           |
|                    | -                    | -                  | SL02 4960             | NNCL 4960 V                | 300             | 420 | 118 | 3   | 6 | 59                 | 341,5 | -     | 385 | 1.650              | 3.800    | 900                               | 460                               | 51,9         |
| 320                | -                    | SL01 4864          | -                     | NNC 4864 V                 | 320             | 400 | 80  | 2,1 | - | 40                 | 352   | 372   | -   | 850                | 2.240    | 900                               | 500                               | 24           |
|                    | -                    | -                  | SL02 4864             | NNCL 4864 V                | 320             | 400 | 80  | 2,1 | 6 | 40                 | 352   | -     | 379 | 850                | 2.240    | 900                               | 500                               | 23,5         |
|                    | SL18 4964            | -                  | -                     | NNCF 4964 V                | 320             | 440 | 118 | 3   | 4 | 59                 | 368   | 400   | 412 | 1.720              | 4.100    | 850                               | 410                               | 56           |
|                    | -                    | SL01 4964          | -                     | NNC 4964 V                 | 320             | 440 | 118 | 3   | - | 59                 | 368   | 400   | -   | 1.720              | 4.100    | 850                               | 410                               | 56           |
|                    | -                    | -                  | SL02 4964             | NNCL 4964 V                | 320             | 440 | 118 | 3   | 6 | 59                 | 368   | -     | 412 | 1.720              | 4.100    | 850                               | 410                               | 54,9         |
| 340                | -                    | SL01 4868          | -                     | NNC 4868 V                 | 340             | 420 | 80  | 2,1 | - | 40                 | 369   | 389   | -   | 870                | 2.350    | 850                               | 480                               | 25,5         |
|                    | -                    | -                  | SL02 4868             | NNCL 4868 V                | 340             | 420 | 80  | 2,1 | 6 | 40                 | 369   | -     | 396 | 870                | 2.350    | 850                               | 480                               | 25           |
|                    | SL18 4968            | -                  | -                     | NNCF 4968 V                | 340             | 460 | 118 | 3   | 4 | 59                 | 386   | 418   | 430 | 1.770              | 4.300    | 800                               | 390                               | 59           |
|                    | -                    | SL01 4968          | -                     | NNC 4968 V                 | 340             | 460 | 118 | 3   | - | 59                 | 386   | 418   | -   | 1.770              | 4.300    | 800                               | 390                               | 59           |
|                    | -                    | -                  | SL02 4968             | NNCL 4968 V                | 340             | 460 | 118 | 3   | 6 | 59                 | 386   | -     | 430 | 1.770              | 4.300    | 800                               | 390                               | 57,8         |
| 360                | -                    | SL01 4872          | -                     | NNC 4872 V                 | 360             | 440 | 80  | 2,1 | - | 40                 | 392   | 412   | -   | 900                | 2.500    | 800                               | 440                               | 27           |
|                    | -                    | -                  | SL02 4872             | NNCL 4872 V                | 360             | 440 | 80  | 2,1 | 6 | 40                 | 392   | -     | 419 | 900                | 2.500    | 800                               | 440                               | 26           |
|                    | SL18 4972            | -                  | -                     | NNCF 4972 V                | 360             | 480 | 118 | 3   | 4 | 59                 | 404   | 436   | 448 | 1.810              | 4.500    | 750                               | 370                               | 62,1         |
|                    | -                    | SL01 4972          | -                     | NNC 4972 V                 | 360             | 480 | 118 | 3   | - | 59                 | 404   | 436   | -   | 1.810              | 4.500    | 750                               | 370                               | 62,1         |
|                    | -                    | -                  | SL02 4972             | NNCL 4972 V                | 360             | 480 | 118 | 3   | 6 | 59                 | 404   | -     | 448 | 1.810              | 4.500    | 750                               | 370                               | 60,8         |

# DIMENSIONAL TABLES

**DISTITEC**



SL01 48, SL01 49  
(Fixed Bearing)

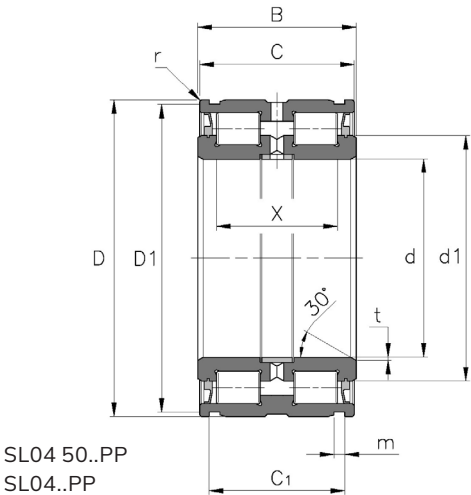


SL02 49  
(Floating Bearing)

| Ø<br>shafts<br><br>mm | Support<br>Bearing<br>CODE | Fixed<br>Bearing<br>CODE | Floating<br>Bearing<br>CODE | CODE<br>according to<br>DIN 5412 | Dimensions (mm) |     |     |     |   | Assembly dim.<br>(mm) |                |                |     | Basic load<br>ratings |                   | Fatigue<br>load<br>limit<br>nG<br>min-1 | Speed<br>ratings<br>ref.<br>nb<br>min-1 | Weight<br><br>Kg |
|-----------------------|----------------------------|--------------------------|-----------------------------|----------------------------------|-----------------|-----|-----|-----|---|-----------------------|----------------|----------------|-----|-----------------------|-------------------|-----------------------------------------|-----------------------------------------|------------------|
|                       |                            |                          |                             |                                  | d               | D   | B   | rs  | s | C                     | d <sub>1</sub> | D <sub>1</sub> | E   | dyn.<br>C<br>kN       | stat.<br>C0<br>kN |                                         |                                         |                  |
| 380                   | -                          | SL01 4876                | -                           | NNC 4876 V                       | 380             | 480 | 100 | 2,1 | - | 50                    | 421            | 446            | -   | 1.310                 | 3.450             | 750                                     | 400                                     | 45,5             |
|                       | -                          | -                        | SL02 4876                   | NNCL 4876 V                      | 380             | 480 | 100 | 2,1 | 6 | 50                    | 421            | -              | 455 | 1.310                 | 3.450             | 750                                     | 400                                     | 44               |
|                       | SL18 4976                  | -                        | -                           | NNCF 4976V                       | 380             | 520 | 140 | 4   | 5 | 70                    | 431            | 467,5          | 481 | 2.270                 | 5.600             | 700                                     | 340                                     | 92,4             |
|                       | -                          | SL01 4976                | -                           | NNC 4976 V                       | 380             | 520 | 140 | 4   | - | 70                    | 431            | 467,5          | -   | 2.270                 | 5.600             | 700                                     | 340                                     | 92,4             |
|                       | -                          | -                        | SL02 4976                   | NNCL 4976 V                      | 380             | 520 | 140 | 4   | 7 | 70                    | 431            | -              | 481 | 2.270                 | 5.600             | 700                                     | 340                                     | 90,5             |
| 400                   | -                          | SL01 4880                | -                           | NNC 4880 V                       | 400             | 500 | 100 | 2,1 | - | 50                    | 435            | 461            | -   | 1.330                 | 3.600             | 700                                     | 380                                     | 46,5             |
|                       | -                          | -                        | SL02 4880                   | NNCL 4880 V                      | 400             | 500 | 100 | 2,1 | 6 | 50                    | 435            | -              | 470 | 1.330                 | 3.600             | 700                                     | 380                                     | 45,8             |
|                       | SL18 4980                  | -                        | -                           | NNCF 4980 V                      | 400             | 540 | 140 | 4   | 5 | 70                    | 451            | 488            | 501 | 2.330                 | 5.900             | 700                                     | 310                                     | 96,5             |
|                       | -                          | SL01 4980                | -                           | NNC 4980 V                       | 400             | 540 | 140 | 4   | - | 70                    | 451            | 488            | -   | 2.330                 | 5.900             | 700                                     | 310                                     | 96,5             |
|                       | -                          | -                        | SL02 4980                   | NNCL 4980 V                      | 400             | 540 | 140 | 4   | 7 | 70                    | 451            | -              | 501 | 2.330                 | 5.900             | 700                                     | 310                                     | 94,6             |

Cylindrical roller bearings with grooves for full complement roller elastic rings, double rows, with seal

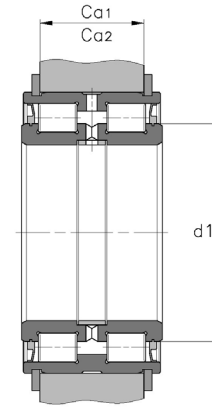
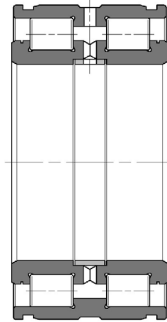
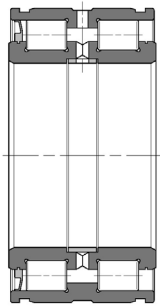
Series:  
SL04 50...PP  
SL04...PP



| Ø shafts<br><br>mm | CODE         | Dimensions (mm) |     |     |     |                |                |     |     |     |      |       | Dimensions (mm) |       |        | Elastic ring 3) | Seeger (DIN 4713) | Load Capacity  |       | Speed | Weight |
|--------------------|--------------|-----------------|-----|-----|-----|----------------|----------------|-----|-----|-----|------|-------|-----------------|-------|--------|-----------------|-------------------|----------------|-------|-------|--------|
|                    |              | d               | D   | B   | C   | C <sub>1</sub> | D <sub>1</sub> | m   | r   | t   | x    | d1    | Ca11)           | Ca22) | C      |                 |                   | C <sub>0</sub> |       |       |        |
|                    |              | +0,200          |     |     |     |                | min            |     |     |     |      |       | -0,200          |       | -0,200 |                 |                   | SW             | A     |       |        |
| 20                 | SL04 5004.PP | 20              | 42  | 30  | 29  | 24,7           | 39,8           | 1,8 | 0,3 | 0,5 | 22,5 | 31    | 21,5            | 21    | SW 42  | 42 x 1,75       | 41,5              | 50             | 4.000 | 0,2   |        |
| 25                 | SL04 5005.PP | 25              | 47  | 30  | 29  | 24,7           | 44,8           | 1,8 | 0,3 | 0,5 | 22,5 | 35,5  | 21,5            | 21    | SW 47  | 47 x 1,75       | 45,5              | 59             | 3.200 | 0,24  |        |
| 30                 | SL04 5006.PP | 30              | 55  | 34  | 33  | 28,2           | 52,8           | 2,1 | 0,3 | 0,5 | 25,5 | 41    | 25              | 24    | SW 55  | 55 x 2          | 52                | 69             | 2.660 | 0,37  |        |
| 35                 | SL04 5007.PP | 35              | 62  | 36  | 35  | 30,2           | 59,8           | 2,1 | 0,3 | 0,5 | 27,5 | 46,5  | 27              | 26    | SW 62  | 62 x 2          | 64,8              | 108,5          | 2.285 | 0,48  |        |
| 40                 | SL04 5008.PP | 40              | 68  | 38  | 37  | 32,2           | 65,8           | 2,7 | 0,6 | 0,8 | 28,5 | 51,5  | 28              | 27    | SW 68  | 68 x 2,5        | 80                | 120            | 1.800 | 0,56  |        |
| 45                 | SL04 5009.PP | 45              | 75  | 40  | 39  | 34,2           | 72,8           | 2,7 | 0,6 | 0,8 | 30,5 | 57,5  | 30              | 29    | SW 75  | 75 x 2,5        | 98                | 141            | 1.550 | 0,7   |        |
| 50                 | SL04 5010.PP | 50              | 80  | 40  | 39  | 34,2           | 77,8           | 2,7 | 0,6 | 0,8 | 30,5 | 62    | 30              | 29    | SW 80  | 80 x 2,5        | 103               | 154            | 1.400 | 0,76  |        |
| 55                 | SL04 5011.PP | 55              | 90  | 46  | 45  | 40,2           | 87,4           | 3,2 | 0,6 | 1   | 36   | 69    | 35              | 34    | SW 90  | 90 x 3          | 119,5             | 195            | 1.260 | 1,18  |        |
| 60                 | SL04 5012.PP | 60              | 95  | 46  | 45  | 40,2           | 92,4           | 3,2 | 0,6 | 1   | 36   | 74    | 35              | 34    | SW 95  | 95 x 3          | 149,5             | 251            | 1.150 | 1,26  |        |
| 65                 | SL04 5013.PP | 65              | 100 | 46  | 45  | 40,2           | 97,4           | 3,2 | 0,6 | 1   | 36   | 79    | 35              | 34    | SW 100 | 100 x 3         | 164               | 262            | 1.100 | 1,33  |        |
| 70                 | SL04 5014.PP | 70              | 110 | 54  | 53  | 48,2           | 107,4          | 4,2 | 0,6 | 1   | 42   | 85    | 43              | 40    | SW 110 | 110 x 4         | 180               | 275            | 1.080 | 1,87  |        |
| 75                 | SL04 5015.PP | 75              | 115 | 54  | 53  | 48,2           | 112,1          | 4,2 | 0,6 | 1   | 42   | 90    | 43              | 40    | SW 115 | 115 x 4         | 198               | 305            | 1.060 | 1,96  |        |
| 80                 | SL04 5016.PP | 80              | 125 | 60  | 59  | 54,2           | 122,1          | 4,2 | 0,6 | 1,5 | 48   | 97,5  | 49              | 46    | SW 125 | 125 x 4         | 205               | 350,5          | 1.000 | 2,71  |        |
| 85                 | SL04 5017.PP | 85              | 130 | 60  | 59  | 54,2           | 127,1          | 4,2 | 0,6 | 1,5 | 48   | 104,5 | 49              | 46    | SW 130 | 130 x 4         | 215               | 360            | 941   | 2,83  |        |
| 90                 | SL04 5018.PP | 90              | 140 | 67  | 66  | 59,2           | 137            | 4,2 | 0,6 | 1,5 | 54   | 109,5 | 54              | 51    | SW 140 | 140 x 4         | 312,5             | 544            | 890   | 3,71  |        |
| 95                 | SL04 5019.PP | 95              | 145 | 67  | 66  | 59,2           | 142            | 4,2 | 0,6 | 1,5 | 54   | 113,5 | 54              | 51    | SW 145 | 145 x 4         | 315               | 560            | 840   | 3,88  |        |
| 100                | SL04 5020.PP | 100             | 150 | 67  | 66  | 59,2           | 147            | 4,2 | 0,6 | 1,5 | 54   | 118   | 54              | 51    | SW 150 | 150 x 4         | 330               | 580            | 760   | 3,95  |        |
| 110                | SL04 5022.PP | 110             | 170 | 80  | 79  | 70,2           | 167            | 4,2 | 0,6 | 1,8 | 64   | 132   | 65              | 62    | SW 170 | 170 x 4         | 400               | 690            | 730   | 6,57  |        |
| 120                | SL04 5024.PP | 120             | 180 | 80  | 79  | 71,2           | 176            | 4,2 | 0,6 | 1,8 | 64   | 141,5 | 65              | 63    | SW 180 | 180 x 4         | 457,7             | 870            | 670   | 7,04  |        |
| 130                | SL04 5026.PP | 130             | 200 | 95  | 94  | 83,2           | 196            | 4,2 | 0,6 | 1,8 | 77   | 157   | 77              | 75    | SW 200 | 200 x 4         | 550               | 980            | 620   | 10,5  |        |
|                    | SL04 130.PP  | 130             | 190 | 80  | 79  | 71,2           | 186            | 4,2 | 0,6 | 1,8 | 64   | 151   | 65              | 63    | SW 190 | 190 x 4         | 425               | 790            | 630   | 7,5   |        |
| 140                | SL04 5028.PP | 140             | 210 | 95  | 94  | 83,2           | 206            | 5,2 | 0,6 | 1,8 | 77   | 165,5 | 77              | 73    | SW 210 | 210 x 5         | 630               | 1.120          | 570   | 11,1  |        |
|                    | SL04 140.PP  | 140             | 200 | 80  | 79  | 71,2           | 196            | 4,2 | 0,6 | 1,8 | 64   | 160,5 | 65              | 63    | SW 200 | 200 x 4         | 445               | 850            | 580   | 8     |        |
| 150                | SL04 5030.PP | 150             | 225 | 100 | 99  | 87,2           | 221            | 5,2 | 0,6 | 2   | 80   | 176   | 81              | 77    | SW 225 | 225 x 5         | 700               | 1.270          | 540   | 13,3  |        |
|                    | SL04 150.PP  | 150             | 210 | 80  | 79  | 71,2           | 206            | 5,2 | 0,6 | 1,8 | 64   | 170   | 65              | 61    | SW 210 | 210 x 5         | 472               | 920            | 550   | 8,4   |        |
| 160                | SL04 5032.PP | 160             | 240 | 109 | 108 | 95,2           | 236            | 5,2 | 0,6 | 2   | 89   | 189,5 | 89              | 85    | SW 240 | 240 x 5         | 750               | 1.370          | 500   | 16,6  |        |
|                    | SL04 160.PP  | 160             | 220 | 80  | 79  | 71,2           | 216            | 5,2 | 0,6 | 1,8 | 64   | 184,5 | 65              | 61    | SW 220 | 220 x 5         | 480               | 970            | 520   | 8,8   |        |

# DIMENSIONAL TABLES

**DISTITEC**

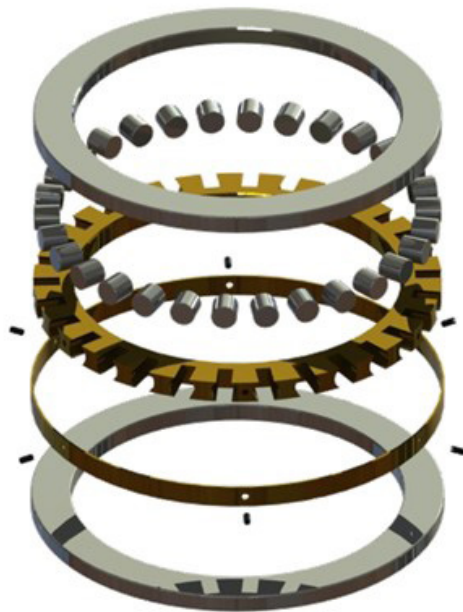


SL04 50..P  
SL04..P

SL04 50  
SL04

Assembly dimensions

| Ø<br>shafts<br><br>mm | CODE         | Dimensions (mm) |     |     |     |                |                |     |     |     |     |   | Dimensions (mm) |        |       | Elastic<br>ring 3) | Seeger<br>(DIN 4713) | Load<br>Capacity |        | Speed    | Weight |
|-----------------------|--------------|-----------------|-----|-----|-----|----------------|----------------|-----|-----|-----|-----|---|-----------------|--------|-------|--------------------|----------------------|------------------|--------|----------|--------|
|                       |              | d               | D   | B   | C   | C <sub>1</sub> | D <sub>1</sub> | m   | r   | min | t   | x | d1              | Ca11)  | Ca22) |                    |                      | C                | C0     |          |        |
|                       |              |                 |     |     |     | +0,200         |                |     |     |     |     |   | -0,200          | -0,200 |       | SW                 | A                    | KN               | KN     | rev./min | Kg     |
| 170                   | SL04 5034.PP | 170             | 260 | 122 | 121 | 107,2          | 254            | 5,2 | 0,6 | 2   | 100 |   | 201             | 99     | 97    | SW 260             | 260 x 5              | 1.168            | 2.244  | 470      | 22,6   |
|                       | SL04 170.PP  | 170             | 230 | 80  | 79  | 71,2           | 226            | 5,2 | 0,6 | 1,8 | 64  |   | 194             | 65     | 61    | SW 230             | 230 x 5              | 500              | 1.000  | 480      | 9,3    |
| 180                   | SL04 5036.PP | 180             | 280 | 136 | 135 | 118,2          | 274            | 5,2 | 0,6 | 2   | 112 |   | 218             | 110    | 108   | SW 280             | 280 x 5              | 1.140            | 2.140  | 440      | 30,1   |
|                       | SL04 180.PP  | 180             | 240 | 80  | 79  | 71,2           | 236            | 5,2 | 0,6 | 1,8 | 64  |   | 203,5           | 65     | 61    | SW 240             | 240 x 5              | 500              | 1.080  | 440      | 9,8    |
| 190                   | SL04 5038.PP | 190             | 290 | 136 | 135 | 118,2          | 284            | 5,2 | 0,6 | 2   | 112 |   | 226,5           | 110    | 108   | SW 290             | 290 x 5              | 1.258            | 2.524  | 420      | 31,5   |
|                       | SL04 190.PP  | 190             | 260 | 80  | 79  | 73,2           | 254            | 5,2 | 0,6 | 1,8 | 64  |   | 218             | 65     | 63    | SW 260             | 260 x 5              | 520              | 1.130  | 430      | 12,7   |
| 200                   | SL04 5040.PP | 200             | 310 | 150 | 149 | 128,2          | 304            | 6,3 | 0,6 | 2   | 126 |   | 243,5           | 120    | 116   | SW 310             | 310 x 6              | 1.422            | 2.852  | 400      | 40,8   |
|                       | SL04 200.PP  | 200             | 270 | 80  | 79  | 73,2           | 264            | 5,2 | 0,6 | 1,8 | 64  |   | 227,5           | 65     | 63    | SW 270             | 270 x 5              | 540              | 1.210  | 400      | 13,2   |
| 220                   | SL04 5044.PP | 220             | 340 | 160 | 159 | 138,2          | 334            | 6,3 | 1   | 2   | 132 |   | 260,5           | 130    | 126   | SW 340             | 340 x 6              | 1.580            | 3.100  | 365      | 52,5   |
|                       | SL04 220.PP  | 220             | 300 | 95  | 94  | 83,2           | 294            | 5,2 | 1   | 2   | 72  |   | 249             | 75     | 73    | SW 300             | 300 x 5              | 720              | 1.590  | 380      | 19,5   |
| 240                   | SL04 5048.PP | 240             | 360 | 160 | 159 | 138,2          | 354            | 6,3 | 1   | 2   | 132 |   | 279,5           | 130    | 126   | SW 360             | 360 x 6              | 1.705            | 3.510  | 335      | 56     |
|                       | SL04 240.PP  | 240             | 320 | 95  | 94  | 83,2           | 314            | 6,3 | 1   | 2   | 72  |   | 272             | 75     | 71    | SW 320             | 320 x 6              | 740              | 1.710  | 350      | 21     |
| 260                   | SL04 5052.PP | 260             | 400 | 190 | 189 | 162,2          | 394            | 6,3 | 1,1 | 3   | 150 |   | 305,5           | 154    | 150   | SW 400             | 400 x 6              | 2.380            | 4.700  | 310      | 84,5   |
|                       | SL04 260.PP  | 260             | 340 | 95  | 94  | 83,2           | 334            | 6,3 | 1   | 3   | 75  |   | 293             | 75     | 71    | SW 340             | 340 x 6              | 850              | 2.010  | 330      | 22,5   |
| 280                   | SL04 5056.PP | 280             | 420 | 190 | 189 | 163,2          | 413            | 7,3 | 1,1 | 3   | 150 |   | 321,5           | 154    | 150   | SW 420             | 420 x 7              | 2.600            | 5.200  | 290      | 90     |
|                       | SL04 280.PP  | 280             | 360 | 95  | 94  | 83,2           | 354            | 6,3 | 1   | 3   | 75  |   | 310,5           | 75     | 71    | SW 360             | 360 x 6              | 870              | 2.130  | 300      | 24     |
| 300                   | SL04 5060.PP | 300             | 460 | 218 | 216 | 185,2          | 453            | 7,3 | 1,1 | 3   | 170 |   | 347,5           | 176    | 171   | SW 460             | 460 x 7              | 3.000            | 5.900  | 268      | 126    |
|                       | SL04 300.PP  | 300             | 380 | 95  | 94  | 83,2           | 374            | 6,3 | 1   | 3   | 75  |   | 328,5           | 75     | 171   | SW 380             | 380 x 6              | 900              | 2.260  | 268      | 25,5   |
| 320                   | SL04 5064.PP | 320             | 480 | 218 | 216 | -              | -              | -   | 2,5 | 3   | -   |   | 376             | 176    | -     | -                  | -                    | 2.720            | 6.100  | 250      | 144    |
| 340                   | SL04 5068.PP | 340             | 520 | 243 | 241 | -              | -              | -   | 3   | 3,5 | -   |   | 406             | 194    | -     | -                  | -                    | 3.650            | 8.000  | 235      | 194    |
| 360                   | SL04 5072.PP | 360             | 540 | 243 | 241 | -              | -              | -   | 3   | 3,5 | -   |   | 421             | 194    | -     | -                  | -                    | 3.750            | 8.300  | 225      | 203    |
| 380                   | SL04 5076.PP | 380             | 560 | 243 | 241 | -              | -              | -   | 3   | 3,5 | -   |   | 442             | 194    | -     | -                  | -                    | 3.800            | 8.750  | 210      | 212    |
| 400                   | SL04 5080.PP | 400             | 600 | 272 | 270 | -              | -              | -   | 3   | 3,5 | -   |   | 470             | 210    | -     | -                  | -                    | 4.250            | 9.950  | 200      | 281    |
| 420                   | SL04 5084.PP | 420             | 620 | 272 | 270 | -              | -              | -   | 3   | 3,5 | -   |   | 486             | 210    | -     | -                  | -                    | 4.350            | 10.300 | 190      | 292    |
| 440                   | SL04 5088.PP | 440             | 650 | 280 | 278 | -              | -              | -   | 4   | 4,5 | -   |   | 518             | 210    | -     | -                  | -                    | 4.500            | 11.000 | 180      | 331    |



- 1- Washer for shaft
- 2- Washer for housing
- 3- Bulky or massive cage
- 4- Cylindrical rollers
- 5- Closing ring
- 6- Elastic pins

Cylindrical axial roller bearings that DISTITEC S.R.L. produces have the following technical characteristics:

Washer (for housing and for shafts) made in full hardening steel 100Cr6 (UNI 3097) and 100CrMo7 (UNI 3097), according to their size and on demand in case hardening steel 16MnCr5 e 16CrNi4 (UNI 7846) and 18NiCrMo5 (UNI 7846) depending on dimensions.

They can reach a 60+2 HRc. Hardness.

The depth of the "hard" area, for the rings made in case hardening steel, varies from 0,8/1 mm and increases with the increase of bearings' dimensions and so, of the loads to bear.

Cylindrical rollers made in steel 100Cr6 (UNI 3097) with hardness that can reach 65 HRc and they are made according to the regulation DIN 5402 relative to these components.

Cages made in brass or bronze and on demand in case hardening steel subject to phosphating surface treatment.

Precision class for this type is P0 according to the regulation DIN 620 but on demand, they can be made with a higher precision up to class P4 (DIN 620).

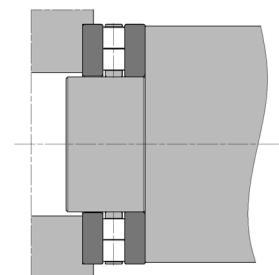
DISTITEC S.R.L. doesn't produce but it can commercialize besides the axial ball bearings of the standard type.

Shafts tolerance e axial bearing housing

| Bearing components             |                      | Shafts tolerance | Hole tolerance |
|--------------------------------|----------------------|------------------|----------------|
| K 811, K812, K 893, K 894      | Guidato internamente | h8               | -              |
| GS 811, GS 812, GS 893, GS 894 | -                    | -                | H9             |
| WS 811, WS 812, WS 893, WS 894 | -                    | h8               | -              |

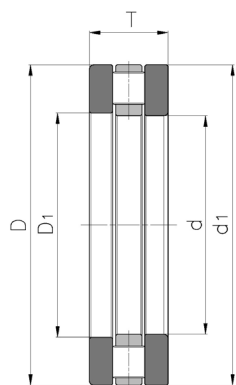
Bearing components tolerances

| Construction series            | Hole | outer diameter       |      | Height               |       |
|--------------------------------|------|----------------------|------|----------------------|-------|
|                                |      | Tol.                 | Tol. | Tol.                 | Tol.  |
| K 811, K812, K 893, K 894      | Dc1  | E111)                | Dc   | α131)                | Dw    |
| GS 811, GS 812, GS 893, GS 894 | D1   | -                    | D    | according to DIN 620 | B h11 |
| WS 811, WS 812, WS 893, WS 894 | d    | according to DIN 620 | d1   | -                    | B h11 |

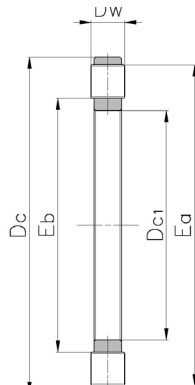


# DIMENSIONAL TABLES

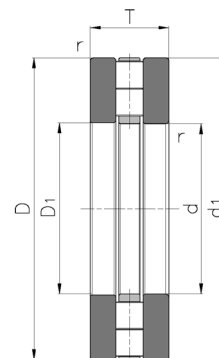
**DISTITEC**



811, 812



K 811, K 812



893, 894

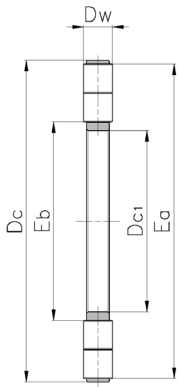
| Ø shafts | Cylindrical axial roller bearing |        | Cylindrical axial roller cage |        | Washer for axial bearings |               |        | Dimensions [mm] |    |      |     |    |     |      |        | Rolling track dimensions |      | Basic load ratings |      | Fatigue load limit | Speed ratings 1) | Speed ratings ref. |
|----------|----------------------------------|--------|-------------------------------|--------|---------------------------|---------------|--------|-----------------|----|------|-----|----|-----|------|--------|--------------------------|------|--------------------|------|--------------------|------------------|--------------------|
|          | Complete supports                | Weight | CODE                          | Weight | Washer for housing        | Washer shafts | Weight | DC1 d           | D1 | DC d | d1  | T  | DW  | B    | dyn. C |                          |      | stat. CO           | PU   |                    |                  |                    |
|          |                                  |        |                               |        |                           |               |        |                 |    |      |     |    |     |      |        | CODE                     | g    |                    |      | Kg                 | CODE             | CODE               |
|          |                                  |        |                               |        |                           |               |        |                 |    |      |     |    |     |      |        | Eb                       | Ea   | KN                 | KN   | KN                 | min -1           | min -1             |
| 15       | 811 02 TN                        | 0,024  | K 811 02 TN                   | 0,006  | GS 811 02                 | WS 811 02     | 0,008  | 15              | 16 | 28   | 28  | 9  | 3,5 | 2,75 | 16     | 27                       | 14,4 | 28,5               | 2,5  | 13.000             | 5.500            |                    |
| 17       | 811 03 TN                        | 0,027  | K 811 03 TN                   | 0,009  | GS 811 03                 | WS 811 03     | 0,009  | 17              | 18 | 30   | 30  | 9  | 3,5 | 2,75 | 18     | 29                       | 15,9 | 33,5               | 3    | 12.000             | 5.000            |                    |
| 20       | 811 04 TN                        | 0,037  | K 811 04 TN                   | 0,013  | GS 811 04                 | WS 811 04     | 0,012  | 20              | 21 | 35   | 35  | 10 | 4,5 | 2,75 | 21     | 34                       | 24,9 | 53                 | 4,55 | 10.000             | 3.800            |                    |
| 25       | 811 05 TN                        | 0,053  | K 811 05 TN                   | 0,015  | GS 811 05                 | WS 811 05     | 0,019  | 25              | 26 | 42   | 42  | 11 | 5   | 3    | 26     | 41                       | 33,5 | 76                 | 6,6  | 8.500              | 3.100            |                    |
| 30       | 811 06 TN                        | 0,057  | K 811 06 TN                   | 0,017  | GS 811 06                 | WS 811 06     | 0,02   | 30              | 32 | 47   | 47  | 11 | 5   | 3    | 31     | 46                       | 35,5 | 86                 | 7,6  | 7.500              | 2.700            |                    |
|          | 812 06 TN                        | 0,123  | K 812 06 TN                   | 0,033  | GS 812 06                 | WS 812 06     | 0,045  | 30              | 32 | 52   | 52  | 16 | 7,5 | 4,25 | 31     | 50                       | 64   | 141                | 11,3 | 7.000              | 2.300            |                    |
|          | 893 06 TN                        | 0,24   | K 893 06 TN                   | 0,04   | GS 893 06                 | WS 893 06     | 0,095  | 30              | 32 | 60   | 60  | 18 | 5,5 | 6,25 | 33     | 59                       | 69   | 197                | 17,9 | 6.500              | 2.200            |                    |
| 35       | 811 07 TN                        | 0,073  | K 811 07 TN                   | 0,019  | GS 811 07                 | WS 811 07     | 0,027  | 35              | 37 | 52   | 52  | 12 | 5   | 3,5  | 36     | 51                       | 39   | 101                | 9,2  | 6.500              | 2.300            |                    |
|          | 812 07 TN                        | 0,195  | K 812 07 TN                   | 0,043  | GS 812 07                 | WS 812 07     | 0,076  | 35              | 37 | 62   | 62  | 18 | 7,5 | 5,25 | 39     | 58                       | 80   | 199                | 16,8 | 6.000              | 2.000            |                    |
|          | 893 07 TN                        | 0,34   | K 893 07 TN                   | 0,053  | GS 893 07                 | WS 893 07     | 0,134  | 35              | 37 | 68   | 68  | 20 | 6   | 7    | 38     | 67                       | 80   | 237                | 21,5 | 5.500              | 2.000            |                    |
| 40       | 811 08 TN                        | 0,105  | K 811 08 TN                   | 0,031  | GS 811 08                 | WS 811 08     | 0,037  | 40              | 42 | 60   | 60  | 13 | 6   | 3,5  | 42     | 58                       | 56   | 148                | 13,1 | 6.000              | 1.900            |                    |
|          | 812 08 TN                        | 0,249  | K 812 08 TN                   | 0,081  | GS 812 08                 | WS 812 08     | 0,084  | 40              | 42 | 68   | 68  | 19 | 9   | 5    | 43     | 66                       | 107  | 265                | 22,4 | 5.500              | 1.600            |                    |
|          | 893 08 TN                        | 0,484  | K 893 08 TN                   | 0,098  | GS 893 08                 | WS 893 08     | 0,193  | 40              | 42 | 78   | 78  | 22 | 7   | 7,5  | 44     | 77                       | 122  | 385                | 34,5 | 4.900              | 1.500            |                    |
| 45       | 811 09 TN                        | 0,13   | K 811 09 TN                   | 0,035  | GS 811 09                 | WS 811 09     | 0,047  | 45              | 47 | 65   | 65  | 14 | 6   | 4    | 47     | 63                       | 59   | 163                | 14,7 | 5.000              | 1.700            |                    |
|          | 812 09 TN                        | 0,287  | K 812 09 TN                   | 0,085  | GS 812 09                 | WS 812 09     | 0,101  | 45              | 47 | 73   | 73  | 20 | 9   | 5,5  | 48     | 70                       | 105  | 265                | 22,8 | 4.900              | 1.500            |                    |
|          | 893 09 TN                        | 0,615  | K 893 09 TN                   | 0,121  | GS 893 09                 | WS 893 09     | 0,247  | 45              | 47 | 85   | 85  | 24 | 7,5 | 8,25 | 49     | 83                       | 139  | 445                | 40   | 4.400              | 1.400            |                    |
| 50       | 811 10 TN                        | 0,14   | K 811 10TN                    | 0,038  | GS 811 10                 | WS 811 10     | 0,051  | 50              | 52 | 70   | 70  | 14 | 6   | 4    | 52     | 68                       | 61   | 177                | 16,2 | 4.800              | 1.600            |                    |
|          | 812 10 TN                        | 0,356  | K 812 10 TN                   | 0,098  | GS 812 10                 | WS 812 10     | 0,129  | 50              | 52 | 78   | 78  | 22 | 9   | 6,5  | 53     | 75                       | 117  | 315                | 27,5 | 4.500              | 1.300            |                    |
|          | 893 10 TN                        | 0,887  | K 893 10 TN                   | 0,175  | GS 893 10                 | WS 893 10     | 0,356  | 50              | 52 | 95   | 95  | 27 | 8   | 9,5  | 56     | 92                       | 167  | 560                | 51   | 4.000              | 1.200            |                    |
| 55       | 811 11 TN                        | 0,218  | K 811 11 TN                   | 0,045  | GS 811 11                 | WS 811 11     | 0,082  | 55              | 57 | 78   | 78  | 16 | 6   | 5    | 57     | 77                       | 90   | 300                | 27,5 | 4.300              | 1.100            |                    |
|          | 812 11 TN                        | 0,568  | K 812 11 TN                   | 0,166  | GS 812 11                 | WS 812 11     | 0,201  | 55              | 57 | 90   | 90  | 25 | 11  | 7    | 59     | 85                       | 154  | 405                | 34   | 4.000              | 1.300            |                    |
|          | 893 11 TN                        | 1,18   | K 893 11                      | 0,195  | GS 893 11                 | WS 893 11     | 0,485  | 55              | 57 | 105  | 105 | 30 | 9   | 10,5 | 61     | 103                      | 184  | 600                | 55   | 3.600              | 1.300            |                    |
| 60       | 811 12 TN                        | 0,266  | K 811 12 TN                   | 0,082  | GS 811 12                 | WS 811 12     | 0,092  | 60              | 62 | 85   | 85  | 17 | 7,5 | 4,75 | 62     | 82                       | 103  | 315                | 28,5 | 4.000              | 1.200            |                    |
|          | 812 12 TN                        | 0,642  | K 812 12 TN                   | 0,176  | GS 812 12                 | WS 812 12     | 0,233  | 60              | 62 | 95   | 95  | 26 | 11  | 7,5  | 64     | 91                       | 172  | 480                | 41   | 3.700              | 1.100            |                    |
|          | 893 12 TN                        | 1,26   | K 893 12 TN                   | 0,21   | GS 893 12                 | WS 893 12     | 0,517  | 60              | 62 | 110  | 110 | 30 | 9   | 10,5 | 66     | 108                      | 196  | 670                | 61   | 3.400              | 1.100            |                    |
|          | 894 12 TN                        | 2,818  | K 894 12 TN                   | 0,538  | GS 894 12                 | WS 894 12     | 1,115  | 60              | 62 | 130  | 130 | 42 | 14  | 14   | 65     | 126                      | 390  | 1220               | 107  | 3.000              | 900              |                    |

TN = Plastic cage, permissible functioning temperature: 120° C (continuous functioning).

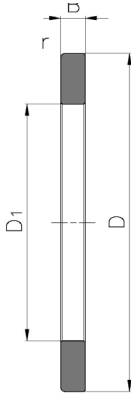
1) N° of spins for oil functioning

For grease lubrication it is permissible 25% of the values indicated in the table.

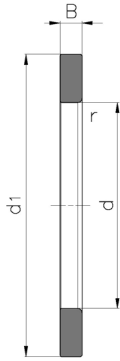
DIMENSIONAL TABLES



893, 894



GS 811, GS 812  
GS 893, GS 894



WS 811, WS 812  
WS 893, WS 894

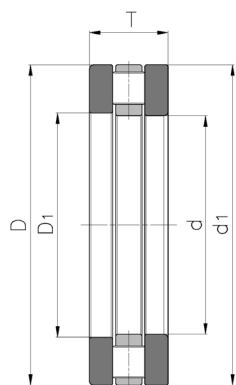
| Ø<br>shafts | Cylindrical axial roller bearing |        | Cylindrical axial roller cage |        | Washer for axial bearings |               |        | Dimensions (mm) |     |      |     |    |      |      |     | Rolling track dimensions |        | Basic load ratings |      | Fatigue load limit | Speed ratings 1) | Speed ratings ref. |
|-------------|----------------------------------|--------|-------------------------------|--------|---------------------------|---------------|--------|-----------------|-----|------|-----|----|------|------|-----|--------------------------|--------|--------------------|------|--------------------|------------------|--------------------|
|             | Complete support                 | Weight | CODE                          | Weight | Washer for housing        | Washer shafts | Weight | DC1 d           | D1  | DC d | d1  | T  | DW   | B    | Eb  | Ea                       | dyn. C | stat. C0           | PU   | nG                 | nB               |                    |
|             | CODE                             | g      |                               | Kg     | CODE                      | CODE          | Kg     |                 |     |      |     |    |      |      |     |                          | KN     | KN                 | KN   | min-1              | min-1            |                    |
| 65          | 811 13 TN                        | 0,31   | K 811 13 TN                   | 0,09   | GS 811 13                 | WS 811 13     | 0,11   | 65              | 67  | 90   | 90  | 18 | 7,5  | 5,25 | 67  | 87                       | 107    | 340                | 30,5 | 3.700              | 1.100            |                    |
|             | 812 13 TN                        | 0,721  | K 812 13 TN                   | 0,19   | GS 812 13                 | WS 812 13     | 0,27   | 65              | 67  | 100  | 100 | 27 | 11   | 8    | 69  | 96                       | 177    | 500                | 44   | 3.500              | 1.000            |                    |
|             | 893 13 TN                        | 1,33   | K 893 13 TN                   | 0,21   | GS 893 13                 | WS 893 13     | 0,54   | 65              | 67  | 115  | 115 | 30 | 9    | 10,5 | 71  | 113                      | 194    | 670                | 62   | 3.200              | 1.100            |                    |
|             | 894 13 TN                        | 3,52   | K 894 13 TN                   | 0,72   | GS 894 13                 | WS 894 13     | 1,4    | 65              | 68  | 140  | 140 | 45 | 15   | 15   | 70  | 135                      | 445    | 1410               | 122  | 2.800              | 800              |                    |
| 70          | 811 14 TN                        | 0,33   | K 811 14 TN                   | 0,09   | GS 811 14                 | WS 811 14     | 0,12   | 70              | 72  | 95   | 95  | 18 | 7,5  | 5,25 | 72  | 92                       | 111    | 365                | 33   | 3.500              | 1.000            |                    |
|             | 812 14 TN                        | 0,768  | K 812 14 TN                   | 0,21   | GS 812 14                 | WS 812 14     | 0,28   | 70              | 72  | 105  | 105 | 27 | 11   | 8    | 74  | 102                      | 187    | 550                | 48,5 | 3.300              | 950              |                    |
|             | 893 14 TN                        | 1,82   | K 893 14 TN                   | 0,29   | GS 893 14                 | WS 893 14     | 0,8    | 70              | 72  | 125  | 125 | 34 | 10   | 12   | 76  | 123                      | 239    | 830                | 76   | 3.000              | 1.000            |                    |
|             | 894 14 TN                        | 4,18   | K 894 14 TN                   | 0,76   | GS 894 14                 | WS 894 14     | 1,73   | 70              | 73  | 150  | 150 | 48 | 16   | 16   | 76  | 147                      | 475    | 1500               | 127  | 2.600              | 800              |                    |
| 75          | 811 15 TN                        | 0,39   | K 811 15 TN                   | 0,1    | GS 811 15                 | WS 811 15     | 0,14   | 75              | 77  | 100  | 100 | 19 | 7,5  | 5,75 | 78  | 97                       | 107    | 350                | 32   | 3.300              | 1.000            |                    |
|             | 812 15 TN                        | 0,8    | K 812 15 TN                   | 0,19   | GS 812 15                 | WS 812 15     | 0,29   | 75              | 77  | 110  | 110 | 27 | 11   | 8    | 79  | 106                      | 172    | 500                | 44,5 | 3.100              | 1.000            |                    |
|             | 893 15 TN                        | 2,23   | K 893 15 TN                   | 0,38   | GS 893 15                 | WS 893 15     | 0,97   | 75              | 77  | 135  | 135 | 36 | 11   | 12,5 | 81  | 132                      | 285    | 1010               | 90   | 2.700              | 900              |                    |
|             | 894 15                           | 5,96   | K 894 15                      | 1,78   | GS 894 15                 | WS 894 15     | 2,09   | 75              | 78  | 160  | 160 | 51 | 17   | 17   | 82  | 156                      | 500    | 1580               | 131  | 2.500              | 800              |                    |
| 80          | 811 16 TN                        | 0,4    | K 811 16 TN                   | 0,1    | GS 811 16                 | WS 811 16     | 0,14   | 80              | 8   | 105  | 105 | 19 | 7,5  | 5,75 | 83  | 102                      | 106    | 350                | 32,5 | 3.100              | 1.000            |                    |
|             | 812 16 TN                        | 0,9    | K 812 16 TN                   | 0,23   | GS 812 16                 | WS 812 16     | 0,33   | 80              | 82  | 115  | 115 | 28 | 11   | 8,5  | 84  | 112                      | 201    | 630                | 56   | 3.000              | 850              |                    |
|             | 893 16 TN                        | 2,37   | K 893 16 TN                   | 0,42   | GS 893 16                 | WS 893 16     | 1      | 80              | 82  | 140  | 140 | 36 | 11   | 12,5 | 86  | 137                      | 305    | 1110               | 99   | 2.600              | 800              |                    |
|             | 894 16                           | 7,04   | K 894 16                      | 2,04   | GS 894 16                 | WS 894 16     | 2,5    | 80              | 83  | 170  | 170 | 54 | 18   | 18   | 88  | 165                      | 560    | 1770               | 144  | 2.300              | 750              |                    |
| 85          | 811 17 TN                        | 0,42   | K 811 17 TN                   | 0,12   | GS 811 17                 | WS 811 17     | 0,15   | 85              | 87  | 110  | 110 | 19 | 7,5  | 5,75 | 87  | 108                      | 112    | 385                | 36   | 3.000              | 900              |                    |
|             | 812 17 TN                        | 1,26   | K 812 17 TN                   | 0,28   | GS 812 17                 | WS 812 17     | 0,49   | 85              | 88  | 125  | 125 | 31 | 12   | 9,5  | 90  | 119                      | 217    | 660                | 58   | 2.700              | 900              |                    |
|             | 893 17                           | 3      | K 893 17                      | 0,54   | GS 893 17                 | WS 893 17     | 1,23   | 85              | 88  | 150  | 150 | 39 | 12   | 13,5 | 93  | 147                      | 325    | 1140               | 99   | 2.500              | 850              |                    |
|             | 894 17                           | 8,65   | K 894 17                      | 2,71   | GS 894 17                 | WS 894 17     | 2,97   | 85              | 88  | 180  | 180 | 58 | 19   | 19,5 | 93  | 175                      | 620    | 1980               | 158  | 2.200              | 700              |                    |
| 90          | 811 18 TN                        | 0,62   | K 811 18 TN                   | 0,15   | GS 811 18                 | WS 811 18     | 0,23   | 90              | 92  | 120  | 120 | 22 | 9    | 6,5  | 93  | 117                      | 141    | 465                | 43   | 2.700              | 900              |                    |
|             | 812 18 TN                        | 1,77   | K 812 18 TN                   | 0,54   | GS 812 18                 | WS 812 18     | 0,61   | 90              | 93  | 135  | 135 | 35 | 14   | 10,5 | 95  | 129                      | 290    | 890                | 76   | 2.600              | 750              |                    |
|             | 893 18                           | 3,28   | K 893 18                      | 0,62   | GS 893 18                 | WS 893 18     | 1,33   | 90              | 93  | 155  | 155 | 39 | 12   | 13,5 | 98  | 152                      | 335    | 1200               | 103  | 2.400              | 800              |                    |
|             | 894 18                           | 9,94   | K 894 18                      | 3,04   | GS 894 18                 | WS 894 18     | 3,45   | 90              | 93  | 190  | 190 | 60 | 20   | 20   | 99  | 185                      | 680    | 2200               | 172  | 2.100              | 650              |                    |
| 100         | 811 20 TN                        | 0,95   | K 811 20 TN                   | 0,25   | GS 811 20                 | WS 811 20     | 0,35   | 100             | 102 | 135  | 135 | 25 | 7    | 7    | 104 | 131                      | 199    | 650                | 57   | 2.500              | 800              |                    |
|             | 812 20 TN                        | 2,2    | K 812 20 TN                   | 0,6    | GS 812 20                 | WS 812 20     | 0,8    | 100             | 103 | 150  | 150 | 38 | 11,5 | 11,5 | 107 | 142                      | 340    | 1080               | 89   | 2.300              | 700              |                    |
|             | 893 20                           | 4,19   | K 893 20                      | 0,81   | GS 893 20                 | WS 893 20     | 1,69   | 100             | 103 | 170  | 170 | 42 | 14,5 | 14,5 | 107 | 167                      | 380    | 1400               | 118  | 2.100              | 750              |                    |
|             | 894 20                           | 13,4   | K 894 20                      | 0,39   | GS 894 20                 | WS 894 20     | 4,75   | 100             | 103 | 210  | 210 | 67 | 22,5 | 22,5 | 111 | 205                      | 850    | 2850               | 218  | 1.900              | 550              |                    |

TN = Plastic cage, permissible functioning temperature: 120° C (continuous functioning).  
1) N° of spins for oil functioning  
For grease lubrication it is permissible 25% of the values indicated in the table.

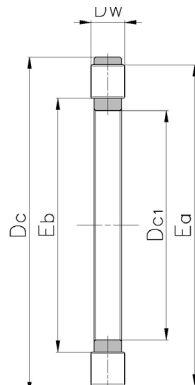


# DIMENSIONAL TABLES

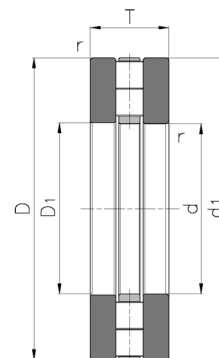
**DISTITEC**



811, 812



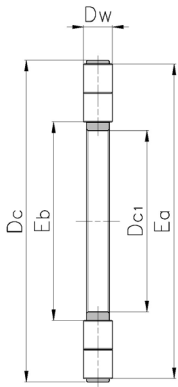
K 811, K 812



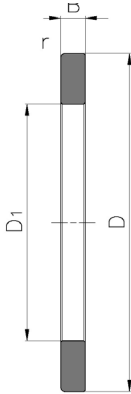
893, 894

| Ø shafts | Cylindrical axial roller bearing |        | Cylindrical axial roller cage |        | Washer for axial bearings |               |        | Dimensions (mm)] |     |      |     |     |    |      |     | Rolling track dimensions |        | Basic load ratings |     | Fatigue load limit | Speed ratings 1) | Speed ratings ref. |
|----------|----------------------------------|--------|-------------------------------|--------|---------------------------|---------------|--------|------------------|-----|------|-----|-----|----|------|-----|--------------------------|--------|--------------------|-----|--------------------|------------------|--------------------|
|          | Complete supports                | Weight | CODE                          | Weight | Washer for housing        | Washer shafts | Weight | DC1 d            | D1  | DC d | d1  | T   | DW | B    | Eb  | Ea                       | dyn. C | stat. C0           | PU  | nG                 | nB               |                    |
|          | CODE                             | g      |                               | Kg     | CODE                      | CODE          | Kg     |                  |     |      |     |     |    |      |     |                          | KN     | KN                 | KN  | min-1              | min-1            |                    |
| 110      | 811 22 TN                        | 10,4   | K 811 22 TN                   | 0,27   | GS 811 22                 | WS 811 22     | 0,385  | 110              | 112 | 145  | 145 | 25  | 11 | 7    | 114 | 141                      | 207    | 700                | 60  | 2.300              | 750              |                    |
|          | 812 22 TN                        | 2,29   | K 812 22 TN                   | 0,53   | GS 812 22                 | WS 812 22     | 0,88   | 110              | 113 | 160  | 160 | 38  | 15 | 11,5 | 117 | 152                      | 325    | 1030               | 84  | 2.100              | 700              |                    |
|          | 893 22                           | 6,55   | K 893 22                      | 1,67   | GS 893 22                 | WS 893 22     | 2,44   | 110              | 113 | 190  | 190 | 48  | 15 | 16,5 | 120 | 186                      | 500    | 1870               | 152 | 1.900              | 600              |                    |
|          | 894 22                           | 17,41  | K 894 22                      | 5,11   | GS 894 22                 | WS 894 22     | 6,15   | 110              | 113 | 230  | 230 | 73  | 24 | 24,5 | 121 | 223                      | 1000   | 3400               | 255 | 1.700              | 470              |                    |
| 120      | 811 24 TN                        | 1,12   | K 811 24 TN                   | 0,29   | GS 811 24                 | WS 811 24     | 0,415  | 120              | 122 | 155  | 155 | 25  | 11 | 7    | 124 | 151                      | 214    | 760                | 64  | 2.100              | 650              |                    |
|          | 812 24 TN                        | 2,54   | K 812 24 TN                   | 0,58   | GS 812 24                 | WS 812 24     | 0,98   | 120              | 123 | 170  | 170 | 39  | 15 | 12   | 127 | 162                      | 340    | 1120               | 91  | 2.000              | 650              |                    |
|          | 893 24                           | 9,24   | K 893 24                      | 2,44   | GS 893 24                 | WS 893 24     | 3,4    | 120              | 123 | 210  | 210 | 54  | 17 | 18,5 | 130 | 206                      | 640    | 2420               | 189 | 1.700              | 500              |                    |
|          | 894 24                           | 21,77  | K 894 24                      | 6,37   | GS 894 24                 | WS 894 24     | 7,7    | 120              | 123 | 250  | 250 | 78  | 26 | 26   | 133 | 243                      | 1170   | 4000               | 290 | 1.600              | 430              |                    |
| 130      | 811 26 TN                        | 1,67   | K 811 26 TN                   | 0,38   | GS 811 26                 | WS 811 26     | 0,643  | 130              | 132 | 170  | 170 | 30  | 12 | 9    | 135 | 165                      | 250    | 900                | 74  | 1.900              | 650              |                    |
|          | 812 26TN                         | 3,98   | K 812 26 TN                   | 0,92   | GS 812 26                 | WS 812 26     | 1,53   | 130              | 133 | 190  | 187 | 45  | 19 | 13   | 137 | 181                      | 480    | 1520               | 116 | 1.800              | 600              |                    |
|          | 893 26                           | 10     | K 893 26                      | 1,91   | GS 893 26                 | WS 893 26     | 4,045  | 130              | 134 | 225  | 225 | 58  | 18 | 20   | 141 | 220                      | 710    | 2700               | 208 | 1.600              | 480              |                    |
|          | 894 26                           | 26,96  | K 894 26                      | 7,96   | GS 894 26                 | WS 894 26     | 9,5    | 130              | 134 | 270  | 270 | 85  | 28 | 28,5 | 145 | 263                      | 1330   | 4600               | 330 | 1.400              | 390              |                    |
| 140      | 811 28 TN                        | 1,9    | K 811 28 TN                   | 0,4    | GS 811 28                 | WS 811 28     | 0,749  | 140              | 142 | 180  | 178 | 31  | 12 | 9,5  | 145 | 175                      | 260    | 960                | 78  | 1.800              | 600              |                    |
|          | 812 28                           | 4,567  | K 812 28                      | 1,197  | GS 812 28                 | WS 812 28     | 1,635  | 140              | 143 | 200  | 197 | 46  | 19 | 13,5 | 147 | 191                      | 455    | 1450               | 109 | 1.700              | 600              |                    |
|          | 893 28                           | 11,99  | K 893 28                      | 2,39   | GS 893 28                 | WS 893 28     | 4,8    | 140              | 144 | 240  | 240 | 60  | 19 | 20,5 | 152 | 235                      | 820    | 3200               | 239 | 1.500              | 420              |                    |
|          | 894 28                           | 29,7   | K 894 28                      | 8,54   | GS 894 28                 | WS 894 28     | 10,6   | 140              | 144 | 280  | 280 | 85  | 28 | 28,5 | 155 | 273                      | 1390   | 4950               | 350 | 1.400              | 360              |                    |
| 150      | 811 30 TN                        | 2,2    | K 811 30 TN                   | 0,43   | GS 811 30                 | WS 811 30     | 0,796  | 150              | 152 | 190  | 188 | 31  | 12 | 9,5  | 155 | 185                      | 270    | 1020               | 82  | 1.700              | 550              |                    |
|          | 812 30                           | 5,886  | K 812 30                      | 1,52   | GS 812 30                 | WS 812 30     | 2,18   | 150              | 153 | 215  | 212 | 50  | 21 | 14,5 | 158 | 211                      | 590    | 1940               | 144 | 1.600              | 480              |                    |
|          | 893 28                           | 12,63  | K 893 30                      | 2,51   | GS 893 30                 | WS 893 30     | 5,06   | 150              | 154 | 250  | 250 | 60  | 19 | 20,5 | 162 | 245                      | 840    | 3350               | 248 | 1.400              | 400              |                    |
|          | 894 28                           | 35,36  | K 894 30                      | 10,36  | GS 894 30                 | WS 894 30     | 12,5   | 150              | 154 | 300  | 300 | 90  | 30 | 30   | 167 | 293                      | 1570   | 5700               | 395 | 1.300              | 330              |                    |
| 160      | 811 32 TN                        | 2,12   | K 811 32 TN                   | 0,44   | GS 811 32                 | WS 811 32     | 0,842  | 160              | 162 | 200  | 198 | 31  | 12 | 9,5  | 165 | 195                      | 270    | 1050               | 83  | 1.600              | 600              |                    |
|          | 812 32                           | 7,96   | K 812 32                      | 3,36   | GS 812 32                 | WS 812 32     | 2,3    | 160              | 163 | 225  | 222 | 51  | 21 | 15   | 168 | 220                      | 600    | 2030               | 149 | 1.500              | 450              |                    |
|          | 894 32                           | 42     | K 894 32                      | 12,42  | GS 894 32                 | WS 894 32     | 14,8   | 160              | 164 | 320  | 320 | 95  | 32 | 31,5 | 179 | 313                      | 1780   | 6500               | 440 | 1.200              | 310              |                    |
| 170      | 811 34 TN                        | 2,41   | K 811 34 TN                   | 0,66   | GS 811 34                 | WS 811 34     | 1,1    | 170              | 172 | 215  | 213 | 34  | 14 | 10   | 176 | 209                      | 360    | 1380               | 107 | 1.500              | 470              |                    |
|          | 812 34                           | 7,69   | K 812 34                      | 1,89   | GS 812 34                 | WS 812 34     | 2,9    | 170              | 173 | 240  | 237 | 55  | 22 | 16,5 | 180 | 235                      | 680    | 2340               | 168 | 1.400              | 410              |                    |
|          | 894 34                           | 51,87  | K 894 34                      | 14,87  | GS 894 34                 | WS 894 34     | 18,5   | 170              | 174 | 340  | 340 | 103 | 34 | 34,5 | 191 | 333                      | 1990   | 7400               | 485 | 1.100              | 280              |                    |

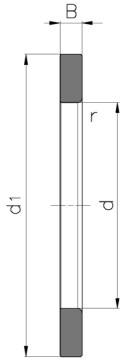
DIMENSIONAL TABLES



893, 894



GS 811, GS 812  
GS 893, GS 894



WS 811, WS 812  
WS 893, WS 894

| Ø<br>shafts | Cylindrical axial roller bearing |        | Cylindrical axial roller cage |        | Washer for axial bearings |               |        | Dimensions (mm) |     |      |     |     |    |      |     |     |     | Rolling track dimensions |          | Basic load ratings |       | Fatigue load limit | Speed ratings 1) | Speed ratings ref. |
|-------------|----------------------------------|--------|-------------------------------|--------|---------------------------|---------------|--------|-----------------|-----|------|-----|-----|----|------|-----|-----|-----|--------------------------|----------|--------------------|-------|--------------------|------------------|--------------------|
|             | Complete supports                | Weight | CODE                          | Weight | Washer for housing        | Washer shafts | Weight | DC1 d           | D1  | DC d | d1  | T   | DW | B    | a r | Eb  | Ea  | dyn. C                   | stat. C0 | PU                 | nG    | nB                 | min-1            | min-1              |
|             | CODE                             | g      |                               | Kg     | CODE                      | CODE          | Kg     |                 |     |      |     |     |    |      | min |     |     |                          |          |                    |       |                    |                  |                    |
| 180         | 811 36                           | 3,04   | K 811 36 M                    | 0,8    | GS 811 36                 | WS 811 36     | 1,12   | 180             | 183 | 225  | 222 | 34  | 14 | 10   | 1,1 | 185 | 219 | 340                      | 1300     | 100                | 1.400 | 490                |                  |                    |
|             | 812 36                           | 8,24   | K 812 36 M                    | 1,98   | GS 812 36                 | WS 812 36     | 3,13   | 180             | 183 | 250  | 247 | 56  | 22 | 17   | 1,5 | 190 | 245 | 690                      | 2440     | 174                | 1.300 | 390                |                  |                    |
|             | 894 36                           | 60,19  | K 894 36 M                    | 17,59  | GS 894 36                 | WS 894 36     | 21,3   | 180             | 184 | 360  | 360 | 109 | 36 | 36,5 | 5   | 200 | 351 | 2210                     | 8200     | 540                | 1.100 | 270                |                  |                    |
| 190         | 811 38                           | 3,84   | K 811 38 M                    | 0,94   | GS 811 38                 | WS 811 38     | 1,45   | 190             | 193 | 240  | 237 | 37  | 15 | 11   | 1,1 | 197 | 233 | 385                      | 1500     | 112                | 1.300 | 460                |                  |                    |
|             | 812 38                           | 10,4   | K 812 38 M                    | 2,73   | GS 812 38                 | WS 812 38     | 3,835  | 190             | 194 | 270  | 267 | 62  | 26 | 18   | 2   | 200 | 265 | 880                      | 3000     | 206                | 1.300 | 360                |                  |                    |
|             | 894 38                           | 65,7   | K 894 38 M                    | 14,5   | GS 894 38                 | WS 894 38     | 25,6   | 190             | 195 | 380  | 380 | 115 | 38 | 38,5 | 5   | 214 | 373 | 2450                     | 9200     | 590                | 1.000 | 250                |                  |                    |
| 200         | 811 40                           | 4      | K 811 40 M                    | 0,98   | GS 811 40                 | WS 811 40     | 1,51   | 200             | 203 | 250  | 247 | 37  | 15 | 11   | 1,1 | 206 | 243 | 390                      | 1550     | 115                | 1.300 | 440                |                  |                    |
|             | 812 40                           | 11,91  | K 812 40 M                    | 3,09   | GS 812 40                 | WS 812 40     | 4,41   | 200             | 204 | 280  | 277 | 62  | 26 | 18   | 2   | 210 | 275 | 900                      | 3150     | 215                | 1.200 | 340                |                  |                    |
|             | 894 40                           | 74,8   | K 894 40 M                    | 16,2   | GS 894 40                 | WS 894 40     | 29,3   | 200             | 205 | 400  | 400 | 122 | 40 | 41   | 5   | 226 | 393 | 2700                     | 10200    | 640                | 950   | 230                |                  |                    |
| 220         | 811 44                           | 4,5    | K 811 44 M                    | 1,32   | GS 811 44                 | WS 811 44     | 1,59   | 220             | 223 | 270  | 267 | 37  | 15 | 11   | 1,1 | 226 | 263 | 420                      | 1730     | 126                | 1.200 | 390                |                  |                    |
|             | 812 44                           | 12,85  | K 812 44 M                    | 3,35   | GS 812 44                 | WS 812 44     | 4,75   | 220             | 224 | 300  | 297 | 63  | 26 | 18,5 | 2   | 230 | 296 | 940                      | 3450     | 231                | 1.100 | 310                |                  |                    |
|             | 894 44                           | 84,4   | K 894 44 M                    | 20     | GS 894 44                 | WS 894 44     | 32,2   | 220             | 225 | 420  | 420 | 122 | 40 | 41   | 6   | 244 | 411 | 2900                     | 11500    | 720                | 900   | 200                |                  |                    |
| 240         | 811 48                           | 7,25   | K 811 48 M                    | 2,11   | GS 811 48                 | WS 811 48     | 2,57   | 240             | 243 | 300  | 297 | 45  | 18 | 13,5 | 1,5 | 248 | 296 | 600                      | 2500     | 175                | 1.100 | 320                |                  |                    |
|             | 812 48                           | 21,95  | K 812 48 M                    | 5,65   | GS 812 48                 | WS 812 48     | 8,15   | 240             | 244 | 340  | 335 | 78  | 32 | 23   | 2,1 | 261 | 335 | 1370                     | 5000     | 320                | 1.000 | 250                |                  |                    |
|             | 894 48                           | 87,8   | K 894 48 M                    | 19,2   | GS 894 48                 | WS 894 48     | 34,3   | 240             | 245 | 440  | 440 | 122 | 40 | 41   | 6   | 266 | 433 | 3000                     | 12200    | 760                | 850   | 190                |                  |                    |
| 260         | 811 52                           | 7,83   | K 811 52 M                    | 2,3    | GS 811 52                 | WS 811 52     | 2,765  | 260             | 263 | 320  | 317 | 45  | 18 | 13,5 | 1,5 | 268 | 316 | 620                      | 2650     | 182                | 1.000 | 300                |                  |                    |
|             | 812 52                           | 23,9   | K 812 52 M                    | 6,1    | GS 812 52                 | WS 812 52     | 8,9    | 260             | 264 | 360  | 355 | 79  | 32 | 23,5 | 2,1 | 280 | 353 | 1440                     | 5400     | 345                | 950   | 230                |                  |                    |
|             | 894 52                           | 114    | K 894 52 M                    | 25,5   | GS 894 52                 | WS 894 52     | 44,25  | 260             | 265 | 480  | 480 | 132 | 44 | 44   | 6   | 288 | 472 | 3600                     | 14700    | 890                | 800   | 170                |                  |                    |
| 280         | 811 56                           | 10,3   | K 811 56 M                    | 3      | GS 811 56                 | WS 811 56     | 3,65   | 280             | 283 | 350  | 347 | 53  | 22 | 15,5 | 1,5 | 288 | 346 | 860                      | 3650     | 243                | 900   | 250                |                  |                    |
|             | 812 56                           | 25,9   | K 812 56 M                    | 6,4    | GS 812 56                 | WS 812 56     | 9,75   | 280             | 284 | 380  | 375 | 80  | 32 | 24   | 2,1 | 300 | 373 | 1460                     | 5600     | 355                | 850   | 220                |                  |                    |
|             | 894 56                           | 142    | K 894 56 M                    | 30,8   | GS 894 56                 | WS 894 56     | 55,6   | 280             | 285 | 520  | 520 | 145 | 48 | 48,5 | 6   | 311 | 512 | 4200                     | 17600    | 1040               | 700   | 150                |                  |                    |
| 300         | 811 60                           | 16,67  | K 811 60 M                    | 4,83   | GS 811 60                 | WS 811 60     | 5,92   | 300             | 304 | 380  | 376 | 62  | 25 | 18,5 | 2   | 315 | 373 | 1060                     | 4500     | 290                | 850   | 220                |                  |                    |
|             | 812 60                           | 40,55  | K 812 60 M                    | 10,15  | GS 812 60                 | WS 812 60     | 15,2   | 300             | 304 | 420  | 415 | 95  | 38 | 28,5 | 3   | 328 | 413 | 1930                     | 7300     | 445                | 800   | 200                |                  |                    |
|             | 894 60                           | 153    | K 894 60 M                    | 32,7   | GS 894 60                 | WS 894 60     | 60,15  | 300             | 305 | 540  | 540 | 145 | 48 | 48,5 | 6   | 331 | 533 | 4350                     | 18500    | 1080               | 700   | 150                |                  |                    |
| 320         | 811 64                           | 17,82  | K 811 64 M                    | 5,12   | GS 811 64                 | WS 811 64     | 6,35   | 320             | 324 | 400  | 396 | 63  | 25 | 19   | 2   | 334 | 394 | 1100                     | 4750     | 300                | 800   | 210                |                  |                    |
|             | 894 64                           | 193    | K 894 64 M                    | 70     | GS 894 64                 | WS 894 64     | 61,5   | 320             | 325 | 580  | 575 | 155 | 68 | 43,5 | 6   | 340 | 573 | 5500                     | 19900    | 1110               | 550   | 140                |                  |                    |

TN = Plastic cage, permissible functioning temperature: 120° C (continuous functioning).

1) N° of spins for oil functioning

For grease lubrication it is permissible 25% of the values indicated in the table.

**DISTITEC**

### Radial bearings' tolerances - Normal precision class ( $\mu\text{m}$ )

| Inner ring |       |      |      | Vdp              |     |       | Vdmp | ΔBs  |        | ΔB1s |      | VBs | Kia |
|------------|-------|------|------|------------------|-----|-------|------|------|--------|------|------|-----|-----|
| d (mm)     |       | Δdmp |      | Diametral Series |     |       |      |      |        |      |      |     |     |
|            |       |      |      | 8,9              | 0,1 | 2,3,4 |      |      |        |      |      |     |     |
| over       | until | sup. | inf. | max              | max | max   | max  | sup. | inf.   | sup. | inf. | max | max |
| 2,5        | 10    | 0    | -8   | 10               | 8   | 6     | 6    | 0    | -120   | 0    | -250 | 15  | 10  |
| 10         | 18    | 0    | -8   | 10               | 8   | 6     | 6    | 0    | -120   | 0    | -250 | 20  | 10  |
| 18         | 30    | 0    | -10  | 13               | 10  | 8     | 8    | 0    | -120   | 0    | -250 | 20  | 13  |
| 30         | 50    | 0    | -12  | 15               | 12  | 9     | 9    | 0    | -120   | 0    | -250 | 20  | 15  |
| 50         | 80    | 0    | -15  | 19               | 19  | 11    | 11   | 0    | -150   | 0    | -380 | 25  | 20  |
| 80         | 120   | 0    | -20  | 25               | 25  | 15    | 15   | 0    | -200   | 0    | -380 | 25  | 25  |
| 120        | 180   | 0    | -25  | 31               | 31  | 19    | 19   | 0    | -250   | 0    | -500 | 30  | 30  |
| 180        | 250   | 0    | -30  | 38               | 38  | 23    | 23   | 0    | -300   | 0    | -500 | 30  | 40  |
| 250        | 315   | 0    | -35  | 44               | 44  | 26    | 26   | 0    | -350   | 0    | -500 | 35  | 50  |
| 315        | 400   | 0    | -40  | 50               | 50  | 30    | 30   | 0    | -400   | 0    | -630 | 40  | 60  |
| 400        | 500   | 0    | -45  | 56               | 56  | 34    | 34   | 0    | -450   | 0    | -630 | 50  | 65  |
| 500        | 630   | 0    | -50  | 63               | 63  | 38    | 38   | 0    | -500   | 0    | -800 | 60  | 70  |
| 630        | 800   | 0    | -75  | -                | -   | -     | -    | 0    | -750   | -    | -    | 70  | 80  |
| 800        | 1.000 | 0    | -100 | -                | -   | -     | -    | 0    | -1.000 | -    | -    | 80  | 90  |
| 1.000      | 1.250 | 0    | -125 | -                | -   | -     | -    | 0    | -1.250 | -    | -    | 100 | 100 |
| 1.250      | 1.600 | 0    | -160 | -                | -   | -     | -    | 0    | -1.600 | -    | -    | 120 | 120 |
| 1.600      | 2.000 | 0    | -200 | -                | -   | -     | -    | 0    | -2.000 | -    | -    | 140 | 140 |

| Outer ring |       |      |      | VDp              |     |     | VDmp | ΔCs  |        | ΔC1s |      | VCs | Kea  |
|------------|-------|------|------|------------------|-----|-----|------|------|--------|------|------|-----|------|
| D (mm)     |       | ΔDmp |      | Diametral Series |     |     |      | sup. | inf.   | sup. | inf. | max |      |
| over       | until | sup. | inf. | max              | max | max | max  |      |        |      |      |     | sup. |
| 6          | 18    | 0    | -8   | 10               | 8   | 6   | 6    | 0    | -120   | 0    | -250 | 15  | 15   |
| 18         | 30    | 0    | -9   | 12               | 9   | 7   | 7    | 0    | -120   | 0    | -250 | 20  | 15   |
| 30         | 50    | 0    | -11  | 14               | 11  | 8   | 8    | 0    | -120   | 0    | -250 | 20  | 20   |
| 50         | 80    | 0    | -13  | 16               | 13  | 10  | 10   | 0    | -120   | 0    | -250 | 20  | 25   |
| 80         | 120   | 0    | -15  | 19               | 19  | 11  | 11   | 0    | -150   | 0    | -380 | 25  | 35   |
| 120        | 150   | 0    | -18  | 23               | 23  | 14  | 14   | 0    | -200   | 0    | -380 | 25  | 40   |
| 150        | 180   | 0    | -25  | 31               | 31  | 19  | 19   | 0    | -250   | 0    | -500 | 30  | 45   |
| 180        | 250   | 0    | -30  | 38               | 38  | 23  | 23   | 0    | -300   | 0    | -500 | 30  | 50   |
| 250        | 315   | 0    | -35  | 44               | 44  | 26  | 26   | 0    | -350   | 0    | -500 | 35  | 60   |
| 315        | 400   | 0    | -40  | 50               | 50  | 30  | 30   | 0    | -400   | 0    | -630 | 40  | 70   |
| 400        | 500   | 0    | -45  | 56               | 56  | 34  | 34   | 0    | -450   | 0    | -630 | 50  | 80   |
| 500        | 630   | 0    | -50  | 63               | 63  | 38  | 38   | 0    | -500   | 0    | -800 | 60  | 100  |
| 630        | 800   | 0    | -75  | 94               | 94  | 55  | 55   | 0    | -750   | -    | -    | 70  | 120  |
| 800        | 1.000 | 0    | -100 | 125              | 125 | 75  | 75   | 0    | -1.000 | -    | -    | 80  | 140  |
| 1.000      | 1.250 | 0    | -125 | -                | -   | -   | -    | 0    | -1.250 | -    | -    | 100 | 160  |
| 1.250      | 1.600 | 0    | -160 | -                | -   | -   | -    | 0    | -1.600 | -    | -    | 120 | 190  |
| 1.600      | 2.000 | 0    | -200 | -                | -   | -   | -    | 0    | -2.000 | -    | -    | 140 | 220  |
| 2.000      | 2.000 | 0    | -250 | -                | -   | -   | -    |      |        |      |      |     | 250  |

### Radial bearings' tolerances - P6 precision class (µm)

| Inner ring |       |      |      | Vdp              |     |       | Vdmp | ΔBs  |        | ΔB1s |      | VBs | Kia |
|------------|-------|------|------|------------------|-----|-------|------|------|--------|------|------|-----|-----|
| d (mm)     |       | Δdmp |      | Diametral Series |     |       |      |      |        |      |      |     |     |
|            |       |      |      | 8,9              | 0,1 | 2,3,4 |      |      |        |      |      |     |     |
| over       | until | sup. | inf. | max              | max | max   | max  | sup. | inf.   | sup. | inf. | max | max |
| 2.5        | 10    | 0    | -7   | 9                | 7   | 5     | 5    | 0    | -120   | 0    | -250 | 15  | 6   |
| 10         | 18    | 0    | -7   | 9                | 7   | 5     | 5    | 0    | -120   | 0    | -250 | 20  | 7   |
| 18         | 30    | 0    | -8   | 10               | 8   | 6     | 6    | 0    | -120   | 0    | -250 | 20  | 8   |
| 30         | 50    | 0    | -10  | 13               | 10  | 8     | 8    | 0    | -120   | 0    | -250 | 20  | 10  |
| 50         | 80    | 0    | -12  | 15               | 15  | 9     | 9    | 0    | -150   | 0    | -380 | 25  | 10  |
| 80         | 120   | 0    | -15  | 19               | 19  | 11    | 11   | 0    | -200   | 0    | -380 | 25  | 13  |
| 120        | 180   | 0    | -18  | 23               | 23  | 14    | 14   | 0    | -250   | 0    | -500 | 30  | 18  |
| 180        | 250   | 0    | -22  | 28               | 28  | 17    | 17   | 0    | -300   | 0    | -500 | 30  | 20  |
| 250        | 315   | 0    | -25  | 31               | 31  | 19    | 19   | 0    | -350   | 0    | -500 | 35  | 25  |
| 315        | 400   | 0    | -30  | 38               | 38  | 23    | 23   | 0    | -400   | 0    | -630 | 40  | 30  |
| 400        | 500   | 0    | -35  | 44               | 44  | 26    | 26   | 0    | -450   | 0    | -630 | 45  | 35  |
| 500        | 630   | 0    | -40  | 50               | 50  | 30    | 30   | 0    | -500   | 0    | -800 | 50  | 40  |
| 630        | 800   | 0    | -55  | -                | -   | -     | -    | 0    | -750   | -    | -    | 55  | 50  |
| 800        | 1.000 | 0    | -75  | -                | -   | -     | -    | 0    | -1.000 | -    | -    | 60  | 60  |
| 1.000      | 1.250 | 0    | -95  | -                | -   | -     | -    | 0    | -1.250 | -    | -    | 70  | 80  |
| 1.250      | 1.600 | 0    | -125 | -                | -   | -     | -    | 0    | -1.600 | -    | -    | 70  | 80  |
| 1.600      | 2.000 | 0    | -150 | -                | -   | -     | -    | 0    | -2.000 | -    | -    | 80  | 100 |

| Outer ring<br>D (mm) |       | ΔDmp |      | VDp                               |     |     | VDmp | ΔCs  |        | ΔC1s |      | VCs | Kea |
|----------------------|-------|------|------|-----------------------------------|-----|-----|------|------|--------|------|------|-----|-----|
|                      |       |      |      | Diametral Series<br>8,9 0,1 2,3,4 |     |     |      |      |        |      |      |     |     |
| over                 | until | sup. | inf. | max                               | max | max | max  | sup. | inf.   | sup. | inf. | max | max |
| 6                    | 18    | 0    | -7   | 9                                 | 7   | 5   | 5    | 0    | -120   | 0    | -250 | 15  | 8   |
| 18                   | 30    | 0    | -8   | 10                                | 8   | 6   | 6    | 0    | -120   | 0    | -250 | 20  | 9   |
| 30                   | 50    | 0    | -9   | 11                                | 9   | 7   | 7    | 0    | -120   | 0    | -250 | 20  | 10  |
| 50                   | 80    | 0    | -11  | 14                                | 11  | 8   | 8    | 0    | -120   | 0    | -250 | 20  | 13  |
| 80                   | 120   | 0    | -13  | 16                                | 16  | 10  | 10   | 0    | -150   | 0    | -380 | 25  | 18  |
| 120                  | 150   | 0    | -15  | 19                                | 19  | 11  | 11   | 0    | -200   | 0    | -380 | 25  | 20  |
| 150                  | 180   | 0    | -18  | 23                                | 23  | 14  | 14   | 0    | -250   | 0    | -500 | 30  | 23  |
| 180                  | 250   | 0    | -20  | 25                                | 25  | 15  | 15   | 0    | -300   | 0    | -500 | 30  | 25  |
| 250                  | 315   | 0    | -25  | 31                                | 31  | 19  | 19   | 0    | -350   | 0    | -500 | 35  | 30  |
| 315                  | 400   | 0    | -28  | 35                                | 35  | 21  | 21   | 0    | -400   | 0    | -630 | 40  | 35  |
| 400                  | 500   | 0    | -33  | 41                                | 41  | 25  | 25   | 0    | -450   | 0    | -630 | 45  | 40  |
| 500                  | 630   | 0    | -38  | 48                                | 48  | 29  | 29   | 0    | -500   | 0    | -800 | 50  | 50  |
| 630                  | 800   | 0    | -45  | 56                                | 56  | 34  | 34   | 0    | -750   | -    | -    | 55  | 60  |
| 800                  | 1.000 | 0    | -60  | 75                                | 75  | 45  | 45   | 0    | -1.000 | -    | -    | 60  | 75  |
| 1.000                | 1.250 | 0    | -80  | -                                 | -   | -   | -    | 0    | -1.250 | -    | -    | 70  | 100 |
| 1.250                | 1.600 | 0    | -100 | -                                 | -   | -   | -    | 0    | -1.600 | -    | -    | 70  | 100 |
| 1.600                | 2.000 | 0    | -140 | -                                 | -   | -   | -    | 0    | -2.000 | -    | -    | 80  | 100 |
| 2.000                | 2.500 | 0    | -160 | -                                 | -   | -   | -    |      |        |      |      |     | 120 |

### Radial bearings' tolerances - P5 precision class (μm)

| Inner ring<br>d (mm)      Δdmp |       |      |      | Vdp              |           | Vdmp |      | ΔBs    |      | ΔB1s |     | VBs |  | Kia |
|--------------------------------|-------|------|------|------------------|-----------|------|------|--------|------|------|-----|-----|--|-----|
|                                |       |      |      | Diametral Series |           |      |      |        |      |      |     |     |  |     |
|                                |       |      |      | 8,9              | 0,1,2,3,4 |      |      |        |      |      |     |     |  |     |
| over                           | until | sup. | inf. | max              | max       | max  | sup. | inf.   | sup. | inf. | max | max |  |     |
| 2,5                            | 10    | 0    | -5   | -5               | 4         | 3    | 0    | -40    | 0    | -250 | 5   | 4   |  |     |
| 10                             | 18    | 0    | -5   | -5               | 4         | 3    | 0    | -80    | 0    | -250 | 5   | 4   |  |     |
| 18                             | 30    | 0    | -6   | -6               | 5         | 3    | 0    | -120   | 0    | -250 | 5   | 4   |  |     |
| 30                             | 50    | 0    | -8   | -8               | 6         | 4    | 0    | -120   | 0    | -250 | 5   | 5   |  |     |
| 50                             | 80    | 0    | -9   | -9               | 7         | 5    | 0    | -150   | 0    | -250 | 6   | 5   |  |     |
| 80                             | 120   | 0    | -10  | -10              | 8         | 5    | 0    | -200   | 0    | -380 | 7   | 6   |  |     |
| 120                            | 180   | 0    | -13  | -13              | 10        | 7    | 0    | -250   | 0    | -380 | 8   | 8   |  |     |
| 180                            | 250   | 0    | -15  | -15              | 12        | 8    | 0    | -300   | 0    | -500 | 10  | 10  |  |     |
| 250                            | 315   | 0    | -18  | -18              | 14        | 9    | 0    | -350   | 0    | -500 | 13  | 13  |  |     |
| 315                            | 400   | 0    | -23  | -23              | 18        | 12   | 0    | -400   | 0    | -630 | 15  | 15  |  |     |
| 400                            | 500   | 0    | -28  | -28              | 21        | 14   | 0    | -450   | 0    | -630 | 18  | 17  |  |     |
| 500                            | 630   | 0    | -35  | -35              | 26        | 18   | 0    | -500   | 0    | -800 | 20  | 19  |  |     |
| 630                            | 800   | 0    | -45  | -                | -         | -    | 0    | -750   | -    | -    | 26  | 22  |  |     |
| 800                            | 1.000 | 0    | -60  | -                | -         | -    | 0    | -1.000 | -    | -    | 32  | 26  |  |     |
| 1.000                          | 1.250 | 0    | -75  | -                | -         | -    | 0    | -1.250 | -    | -    | 38  | 30  |  |     |
| 1.250                          | 1.600 | 0    | -90  | -                | -         | -    | 0    | -1.600 | -    | -    | 45  | 35  |  |     |
| 1.600                          | 2.000 | 0    | -115 | -                | -         | -    | 0    | -2.000 | -    | -    | 55  | 40  |  |     |

| Outer ring       |       | D (mm) |      | ΔDmp |     | VDp       |      | VDmp   |      | ΔCs  |     | ΔC1s |  | VCs |  | Kea |
|------------------|-------|--------|------|------|-----|-----------|------|--------|------|------|-----|------|--|-----|--|-----|
| Diametral Series |       |        |      |      |     |           |      |        |      |      |     |      |  |     |  |     |
| 8,9              |       |        |      |      |     | 0,1,2,3,4 |      |        |      |      |     |      |  |     |  |     |
| over             | until | sup.   | inf. | max  | max | max       | sup. | inf.   | sup. | inf. | max | max  |  |     |  |     |
| 6                | 18    | 0      | -5   | -5   | 4   | 3         | 0    | -40    | 0    | -250 | 5   | 5    |  |     |  |     |
| 18               | 30    | 0      | -6   | -6   | 5   | 3         | 0    | -80    | 0    | -250 | 5   | 6    |  |     |  |     |
| 30               | 50    | 0      | -7   | -7   | 5   | 4         | 0    | -120   | 0    | -250 | 5   | 7    |  |     |  |     |
| 50               | 80    | 0      | -9   | -9   | 7   | 5         | 0    | -120   | 0    | -250 | 5   | 8    |  |     |  |     |
| 80               | 120   | 0      | -10  | -10  | 8   | 5         | 0    | -150   | 0    | -250 | 6   | 10   |  |     |  |     |
| 120              | 150   | 0      | -11  | -11  | 8   | 6         | 0    | -200   | 0    | -380 | 7   | 11   |  |     |  |     |
| 150              | 180   | 0      | -13  | -13  | 10  | 7         | 0    | -250   | 0    | -380 | 8   | 13   |  |     |  |     |
| 180              | 250   | 0      | -15  | -15  | 11  | 8         | 0    | -300   | 0    | -500 | 10  | 15   |  |     |  |     |
| 250              | 315   | 0      | -18  | -18  | 14  | 9         | 0    | -350   | 0    | -500 | 13  | 18   |  |     |  |     |
| 315              | 400   | 0      | -20  | -20  | 15  | 10        | 0    | -400   | 0    | -630 | 15  | 20   |  |     |  |     |
| 400              | 500   | 0      | -23  | -23  | 17  | 12        | 0    | -450   | 0    | -630 | 18  | 23   |  |     |  |     |
| 500              | 630   | 0      | -28  | -28  | 21  | 14        | 0    | -500   | 0    | -800 | 20  | 25   |  |     |  |     |
| 630              | 800   | 0      | -35  | -35  | 26  | 18        | 0    | -750   | -    | -    | 26  | 30   |  |     |  |     |
| 800              | 1.000 | 0      | -40  | -50  | 29  | 25        | 0    | -1.000 | -    | -    | 32  | 35   |  |     |  |     |
| 1.000            | 1.250 | 0      | -50  | -    | -   | -         | 0    | -1.250 | -    | -    | 38  | 40   |  |     |  |     |
| 1.250            | 1.600 | 0      | -65  | -    | -   | -         | 0    | -1.600 | -    | -    | 45  | 45   |  |     |  |     |
| 1.600            | 2.000 | 0      | -85  | -    | -   | -         | 0    | -2.000 | -    | -    | 55  | 55   |  |     |  |     |
| 2.000            | 2.500 | 0      | -110 | -    | -   | -         |      |        |      |      |     | 65   |  |     |  |     |

# TOLERANCES OF CYLINDRICAL ROLLER AXIAL BEARINGS AND DIMENSIONAL SYMBOLS

Radial clearance of cylindrical roller bearings and single and double row needle roller bearings

| Hole's nominal dimension |     | Inner Ring      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |  |  |  |  |
|--------------------------|-----|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|--|--|--|--|
|                          |     | Dimensions [mm] |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |  |  |  |  |
|                          |     | oltre 24 fino a | 24  | 30  | 40  | 50  | 65  | 80  | 100 | 120 | 140 | 160 | 180 | 200 | 225 | 250 | 280 | 315 | 355 | 400 | 450 | 500 | 560 | 630 | 710 | 800  | 900  | 1000 | 1120 | 1250 | 1400 | 1600 | 1800 |  |  |  |  |
|                          |     |                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |  |  |  |  |
| clearance                | min | 0               | 0   | 5   | 5   | 10  | 10  | 15  | 15  | 15  | 20  | 25  | 35  | 45  | 45  | 55  | 55  | 65  | 100 | 110 | 110 | 120 | 140 | 145 | 150 | 180  | 200  | 220  | 230  | 270  | 330  | 380  | 400  |  |  |  |  |
| C2                       | max | 25              | 25  | 30  | 35  | 40  | 45  | 50  | 55  | 60  | 70  | 75  | 90  | 105 | 110 | 125 | 130 | 145 | 190 | 210 | 220 | 240 | 260 | 285 | 310 | 350  | 390  | 430  | 470  | 530  | 610  | 700  | 760  |  |  |  |  |
| clearance                | min | 20              | 20  | 25  | 30  | 40  | 40  | 50  | 50  | 60  | 70  | 75  | 90  | 105 | 110 | 125 | 130 | 145 | 190 | 210 | 220 | 240 | 260 | 285 | 310 | 350  | 390  | 430  | 470  | 530  | 610  | 700  | 760  |  |  |  |  |
| C0 (normal)              | max | 45              | 45  | 50  | 60  | 70  | 75  | 85  | 90  | 105 | 120 | 125 | 145 | 165 | 175 | 195 | 205 | 225 | 280 | 310 | 330 | 360 | 380 | 425 | 470 | 520  | 580  | 640  | 710  | 790  | 890  | 1020 | 1120 |  |  |  |  |
| clearance                | min | 35              | 35  | 45  | 50  | 60  | 65  | 75  | 85  | 100 | 115 | 120 | 140 | 160 | 170 | 190 | 200 | 225 | 280 | 310 | 330 | 360 | 380 | 425 | 470 | 520  | 580  | 640  | 710  | 790  | 890  | 1020 | 1120 |  |  |  |  |
| C3                       | max | 60              | 60  | 70  | 80  | 90  | 100 | 110 | 125 | 145 | 165 | 170 | 195 | 220 | 235 | 260 | 275 | 305 | 370 | 410 | 440 | 480 | 500 | 565 | 630 | 690  | 770  | 850  | 950  | 1050 | 1170 | 1340 | 1480 |  |  |  |  |
| clearance                | min | 50              | 50  | 60  | 70  | 80  | 90  | 105 | 125 | 145 | 165 | 170 | 195 | 220 | 235 | 260 | 275 | 305 | 370 | 410 | 440 | 480 | 500 | 565 | 630 | 690  | 770  | 850  | 950  | 1050 | 1170 | 1340 | 1480 |  |  |  |  |
| C4                       | max | 75              | 75  | 85  | 100 | 110 | 125 | 140 | 165 | 190 | 215 | 220 | 250 | 280 | 300 | 330 | 350 | 385 | 460 | 510 | 550 | 600 | 620 | 705 | 790 | 860  | 960  | 1060 | 1190 | 1310 | 1450 | 1660 | 1840 |  |  |  |  |
| clearance                | min | 75              | 75  | 85  | 100 | 110 | 125 | 140 | 165 | 190 | 215 | 220 | 250 | 280 | 300 | 330 | 350 | 385 | 460 | 510 | 550 | 600 | 620 | 705 | 790 | 860  | 960  | 1060 | 1190 | 1310 | 1450 | 1660 | 1840 |  |  |  |  |
| C5                       | max | 100             | 100 | 110 | 130 | 140 | 160 | 175 | 205 | 235 | 265 | 270 | 305 | 340 | 365 | 400 | 425 | 465 | 550 | 610 | 660 | 720 | 740 | 845 | 950 | 1030 | 1150 | 1270 | 1430 | 1570 | 1730 | 1980 | 2200 |  |  |  |  |

| Axial bearings' tolerances (µm)<br>Washer for shafts |       |                   |      |      |      |                   |     |     |     |     |     | Axial bearings' tolerances (µm)<br>Housing locating washer |       |                   |      |      |      |      |     |     |     |     |     |                    |     |     |     |
|------------------------------------------------------|-------|-------------------|------|------|------|-------------------|-----|-----|-----|-----|-----|------------------------------------------------------------|-------|-------------------|------|------|------|------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|
| Dimensione nominale del foro (mm)                    |       | Precision Classes |      |      |      | Precision Classes |     |     |     |     |     | Dimensione nom. del Øest. (mm)                             |       | Precision Classes |      |      |      |      |     |     |     |     |     | Precision Classes  |     |     |     |
|                                                      |       | Normal, P6, P5    |      | P4   |      | Normal            |     | P6  |     | P5  |     |                                                            |       | Normal, P6, P5    |      | P4   |      |      |     |     |     |     |     | Normal, P6, P5, P4 |     |     |     |
|                                                      |       | Δdmp              | Vdp  | Δdmp | Vdp  | Si                | Si  | Si  | Si  |     |     |                                                            |       | Δdmp              | Vdp  | Δdmp | Vdp  |      |     |     |     |     |     | Se                 |     |     |     |
| over                                                 | until | sup.              | inf. | max  | sup. | inf.              | max | max | max | max | max | over                                                       | until | sup.              | inf. | max  | sup. | inf. | max | max | max | max | max | max                | max | max | max |
| 0                                                    | 18    | 0                 | -8   | 6    | 0    | -7                | 5   | 10  | 5   | 3   | 2   | 10                                                         | 18    | 0                 | -11  | 8    | 0    | -7   | 5   |     |     |     |     |                    |     |     |     |
| 18                                                   | 30    | 0                 | -10  | 8    | 0    | -8                | 6   | 10  | 5   | 3   | 2   | 18                                                         | 30    | 0                 | -13  | 10   | 0    | -8   | 6   |     |     |     |     |                    |     |     |     |
| 30                                                   | 50    | 0                 | -12  | 9    | 0    | -10               | 8   | 10  | 6   | 3   | 2   | 30                                                         | 50    | 0                 | -16  | 12   | 0    | -9   | 7   |     |     |     |     |                    |     |     |     |
| 50                                                   | 80    | 0                 | -15  | 11   | 0    | -12               | 9   | 10  | 7   | 4   | 3   | 50                                                         | 80    | 0                 | -19  | 14   | 0    | -11  | 8   |     |     |     |     |                    |     |     |     |
| 80                                                   | 120   | 0                 | -20  | 15   | 0    | -15               | 11  | 15  | 8   | 4   | 3   | 80                                                         | 120   | 0                 | -22  | 17   | 0    | -13  | 10  |     |     |     |     |                    |     |     |     |
| 120                                                  | 180   | 0                 | -25  | 19   | 0    | -18               | 14  | 15  | 9   | 5   | 4   | 120                                                        | 180   | 0                 | -25  | 19   | 0    | -15  | 11  |     |     |     |     |                    |     |     |     |
| 180                                                  | 250   | 0                 | -30  | 23   | 0    | -22               | 17  | 20  | 10  | 5   | 4   | 180                                                        | 250   | 0                 | -30  | 23   | 0    | -20  | 15  |     |     |     |     |                    |     |     |     |
| 250                                                  | 315   | 0                 | -35  | 26   | 0    | -25               | 19  | 25  | 13  | 7   | 5   | 250                                                        | 315   | 0                 | -35  | 26   | 0    | -25  | 19  |     |     |     |     |                    |     |     |     |
| 315                                                  | 400   | 0                 | -40  | 30   | 0    | -30               | 23  | 30  | 15  | 7   | 5   | 315                                                        | 400   | 0                 | -40  | 30   | 0    | -28  | 21  |     |     |     |     |                    |     |     |     |
| 400                                                  | 500   | 0                 | -45  | 34   | 0    | -35               | 26  | 30  | 18  | 9   | 6   | 400                                                        | 500   | 0                 | -45  | 34   | 0    | -33  | 25  |     |     |     |     |                    |     |     |     |
| 500                                                  | 630   | 0                 | -50  | 38   | 0    | -40               | 30  | 35  | 21  | 11  | 7   | 500                                                        | 630   | 0                 | -50  | 38   | 0    | -38  | 29  |     |     |     |     |                    |     |     |     |
| 630                                                  | 800   | 0                 | -75  | -    | 0    | -50               | -   | 40  | 25  | 13  | 8   | 630                                                        | 800   | 0                 | -75  | 55   | 0    | -45  | 34  |     |     |     |     |                    |     |     |     |
| 800                                                  | 1.000 | 0                 | -100 | -    | 0    | -70               | -   | 45  | 30  | 15  | 8   | 800                                                        | 1.000 | 0                 | -100 | 75   | 0    | -70  | -   |     |     |     |     |                    |     |     |     |
| 1.000                                                | 1.250 | 0                 | -125 | -    | 0    | -100              | -   | 50  | 35  | 18  | 9   | 1.000                                                      | 1.250 | 0                 | -125 | -    | 0    | -90  | -   |     |     |     |     |                    |     |     |     |
| 1.250                                                | 1.600 | 0                 | -160 | -    | -    | -                 | -   | 60  | 40  | 25  | 14  | 1.250                                                      | 1.600 | 0                 | -160 | -    | 0    | -125 | -   |     |     |     |     |                    |     |     |     |
|                                                      |       |                   |      |      |      |                   |     |     |     |     |     | 1.600                                                      | 2.000 | 0                 | -200 | -    | -    | -    | -   |     |     |     |     |                    |     |     |     |

Values are identical to those of the corresponding washer for shafts (Si)

| axial bearings' tolerances: bearing's height (µm)<br>Washer for shafts |       |                                     |        |      |      |      |      |      |      |      |        |
|------------------------------------------------------------------------|-------|-------------------------------------|--------|------|------|------|------|------|------|------|--------|
| Hole's nominal dimension (mm)                                          |       | Precision Classes<br>Normal, P6, P5 |        |      |      |      |      |      |      |      |        |
|                                                                        |       | ΔTs                                 |        | ΔT1s |      | ΔT2s |      | ΔT3s |      | ΔT4s |        |
| over                                                                   | until | sup.                                | inf.   | sup. | inf. | sup. | inf. | sup. | inf. | sup. | inf.   |
| 0                                                                      | 30    | +20                                 | -250   | +100 | -250 | +150 | -400 | +300 | -400 | -    | -      |
| 30                                                                     | 50    | +20                                 | -250   | +100 | -250 | +150 | -400 | +300 | -400 | -    | -      |
| 50                                                                     | 80    | +20                                 | -300   | +100 | -300 | +150 | -500 | +300 | -500 | +20  | -300   |
| 80                                                                     | 120   | +25                                 | -300   | +150 | -300 | +200 | -500 | +400 | -500 | +25  | -300   |
| 120                                                                    | 180   | +25                                 | -400   | +150 | -400 | +200 | -600 | +400 | -600 | +25  | -400   |
| 180                                                                    | 250   | +30                                 | -400   | +150 | -400 | +250 | -600 | +500 | -600 | +30  | -400   |
| 250                                                                    | 315   | +40                                 | -400   | -    | -    | -    | -    | -    | -    | +40  | -400   |
| 315                                                                    | 400   | +40                                 | -500   | -    | -    | -    | -    | -    | -    | +40  | -500   |
| 400                                                                    | 500   | +50                                 | -500   | -    | -    | -    | -    | -    | -    | +50  | -500   |
| 500                                                                    | 630   | +60                                 | -600   | -    | -    | -    | -    | -    | -    | +60  | -600   |
| 630                                                                    | 800   | +70                                 | -750   | -    | -    | -    | -    | -    | -    | +70  | -750   |
| 800                                                                    | 1.000 | +80                                 | -1.000 | -    | -    | -    | -    | -    | -    | +80  | -1.000 |
| 1.000                                                                  | 1.250 | -                                   | -      | -    | -    | -    | -    | -    | -    | +100 | -1.400 |
| 1.250                                                                  | 1.600 | -                                   | -      | -    | -    | -    | -    | -    | -    | +120 | -1.600 |

Dimensional and tolerance symbols

| Symbols                     | Description                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------|
| d                           | Hole's nominal diameter                                                                                           |
| Δdmp                        | Deviation of hole's average diameter from nominal diameter                                                        |
| Vdp                         | Variation of hole's diameter in a radial plane                                                                    |
| Vdmp                        | Variation of hole's average diameter. Difference between maximum and minimum values of a hole's average diameters |
| D                           | Outer diameter's nominal dimension                                                                                |
| ΔDmp                        | Deviation of average outer diameter from nominal dimension                                                        |
| VDp                         | Variation of the outer diameter in a radial plane                                                                 |
| VDmp                        | Variation of the average outer diameter. Difference between maximum and minimum values of average outer diameters |
| ΔBs, ΔCs                    | Deviation of a single measure of inner ring and outer ring's width from nominal dimension                         |
| VBs, ΔCs                    | Variation of inner ring's width and outer ring's width                                                            |
| ΔTs, ΔT1s, ΔT2s, ΔT3s, ΔT4s | Deviation of a single measure of an axial bearing's total height from nominal dimension                           |
| Kia                         | Inner ring's rotation concentricity in the complete bearing (rotation radial precision)                           |
| Kea                         | Outer ring's rotation concentricity in the complete bearing (rotation radial precision)                           |
| Si                          | Washer's thickness variation for shafts in axial bearings (axial bearings' rotation axial precision)              |
| Se                          | Housing washer's thickness variation in axial bearings (axial bearings' rotation axial precision)                 |

## TECHNICAL INFORMATION AND USEFUL CALCULATIONS

Bearing's sizing is done considering load capacity and duration needs it is required to have. For rotary bearings at sustained speeds, in the sizing, the dynamic load has to be considered instead for those that rotate at limited speeds or that perform occasional rocking movements, the static load rating has to be considered. Load ratings and calculation procedures refer to regulation's indications UNI-ISO 281-1 and UNI-ISO 76.

### CYLINDRICAL ROLLER BEARINGS' DYNAMIC LOAD CAPACITY

The "C" dynamic load coefficient is essential for the sizing of rotary bearings at sustained speeds and so dynamically solicited. This value indicates in KG/N the permissible load so that the 90% of a lot of bearings reaches the duration of a million revolutions. This rating is calculated according to the regulation UNI-ISO 281-1.

### CYLINDRICAL ROLLER BEARINGS' STATIC LOAD CAPACITY

The "C0" static load coefficient is essential for the sizing of stationary bearings, rotary bearings at limited speeds or subject to slow rocking movements. This coefficient is defined as that static load that, at the point of greatest stress, determines an overall permanent deformation of the components and the tracks equal to a 1/10000 of components' diameter. This coefficient is calculated according to the regulation UNI-ISO 76.

### STATIC SECURITY COEFFICIENT

|                                                                                                                                                                                                                                                                                                                                                                    |                 |                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The static security coefficient determines the degree of security against deformation and it is calculated with the formula alongside.</p> <p>With a value <math>F_s \leq 3</math> bearings are very stressed instead with a value <math>F_s &gt; 3</math>, bearings are from medium to low stressed with the increase of the value of the security factor.</p> | $F_s = C_0 / F$ | <p>Where:</p> <p><math>F_s</math> = static security coefficient</p> <p><math>C_0</math> = static load coefficient</p> <p><math>F</math> = load applied on the bearing</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### INDICATIVE VALUES OF THE STATIC SAFETY COEFFICIENT

| APPLICATION CASE                                                                                | $F_s$ |
|-------------------------------------------------------------------------------------------------|-------|
| Silent functioning, with few vibrations and normal functioning with minimal noise requirements: |       |
| Bearing with minimal rotation                                                                   | 1     |
| Normal functioning with higher noise requirements                                               | 2     |
| Functioning with high shock loads                                                               | 3     |
| Support with high rotary precision and noise requirements                                       | 4     |

### CYLINDRICAL RADIAL ROLLER BEARING'S AXIAL LOAD CAPACITY

Cylindrical roller bearings, in some of their executions, can absorb significant axial loads as well as radial loads.

The axial range of the bearings or axial wheels depends on the size of the edges integrated into the inner or outer ring as compared to the end surfaces of the components.

This capacity depends moreover on functioning speed and on the lubrication. With the used formula for this calculation, the values of permissible axial load for the bearings or radial wheels are obtained, in the condition of continuous axial load, temporary or alternating.

## FUNCTIONING CLEARANCE

The good functioning of a rolling bearing depends, among various aspects, also on the correct functioning clearance. It is established by the radial clearance and by the variation of the same as a consequence of the assembly interference and by the functioning temperature.

Functioning clearance is defined as the entity of the radial displacement of the shafts with as compared to the outer ring with the mounted bearing. The value of this clearance results from the reduction of the radial clearance as a function of mounting interferences and temperature influences. The reduction of the radial clearance of the mounted bearing due to matings results from the expansion of the inner ring and the contraction of the outer ring. The temperature difference between the inner ring and the outer ring can cause a reduction or an increase of the functioning clearance.

## BEARING'S RADIAL CLEARANCE

The radial clearance of a rolling bearing not mounted is given by the amount of radial displacement, from one extreme position to another, of the inner ring towards the outer ring. The radial clearance of the rolling bearings is divided in four groups (see below table). Bearings are mainly supplied with a normal radial clearance C0 and they guarantee an appropriate functioning clearance under normal application conditions as long as shafts and housing tolerances are expected.

The particular clearances C3 and C4 (higher values than normal) are mainly expected for big size bearings subject to heavy loads, in bearings for which the rings must be assembled with tight fits and when the high temperature presupposes an expansion of the rings themselves causing a functioning clearance reduction. A C2 clearance is expected (lower value than normal) for these bearings subject to alternate heavy loads and combined with rocking movements and with limited speed rating. It is used also for bearings that have to guarantee a certain precision in the application. A particular clearance that isn't normal (C0) has to be requested explicitly by the client (adding the suffix C2 to the CODE or specifying it on the order). All radial clearance values are highlighted in previous pages.

## LUBRIFICATION

An adequate lubrication carried out at regular intervals are important prerequisites for the correct duration of a bearing. The lubricant mainly performs the following functions:

- 1- It makes a film of sufficient flow that separates the contact surfaces.
- 2- It allows the removal of heat.
- 3- It allows the bearing to be sealed from the outside, preventing the entry of solid or liquid external agents.
- 4- It reduces bearing's noise
- 5- It protects the inner ternal of the bearing from corrosion.

Rolling bearings can be lubricated by technical choice at Grease or at oil according to:

- 1- Construction shape and bearing size
- 2- Type of execution of the housing and of the parts in contact with the bearings.
- 3- Operating conditions

## LUBRICATION INTERVALS

Given the complexity of the topic and not wanting to view simplified formulas, we suggest contacting our technical office for clarifications concerning the topic.

Considering the lubrication an important factor for the good functioning of the bearing, we suggest calculating the right lubrication periods by qualified Staff

## NECESSARY CLARIFICATIONS

In this catalogue we included, in the technical section, in the last pages, only the main technical information and related calculations. Let's clarify that the world relating to bearings is very complex and therefore we would not like to burden the task of designers and waste precious time including complicated and demanding formulas.

By contacting our Technical Department, correct values will be given for each type of topic in a short time.

## CALCULATION OF THEORETICAL DURATION

Bearing's lifetime depends on the applied load and the rotation speed and it is calculated with the following formula:

$$L = (C/P)^p$$

$$L_h = (16666/n) \times (C/P)^p$$

$$L = 10^6$$

Nominal duration in millions of revolutions is reached or exceeded by 90% of a sufficiently representative number of equal bearings, before showing the first signs of material fatigue.

$$L_h$$

Nominal duration in hours of operation, corresponding to the definition L.

$$C$$

Dynamic load rating. For radial bearings C corresponds to a load of constant magnitude and direction following which a sufficiently representative number of identical bearings achieves a nominal duration of one million revolutions.

$$P$$

Equivalent bearing load.

$$p = 10/3$$

Duration exponent for cylindrical radial roller bearings and needle roller bearings

$$n = \text{min}^{-1}$$

Functioning speed ratings

## TEMPERATURE INFLUENCE ON THE BEARING

Temperature affects the bearing with a reduction of the dynamic load capacity "C". This effect is evaluated using the following correction formula:

$$C_t = f_t * C$$

Where:

$C_t$  = Effective dynamic load rating for elevated temperatures

$f_t$  = Temperature factor according to the graph 1

C = Load of dynamic load

The reduction of hardness related to temperature's increase, has an irrelevant effect on the static load capacity "C0" and it can therefore be neglected up to temperatures of +300 °C

