

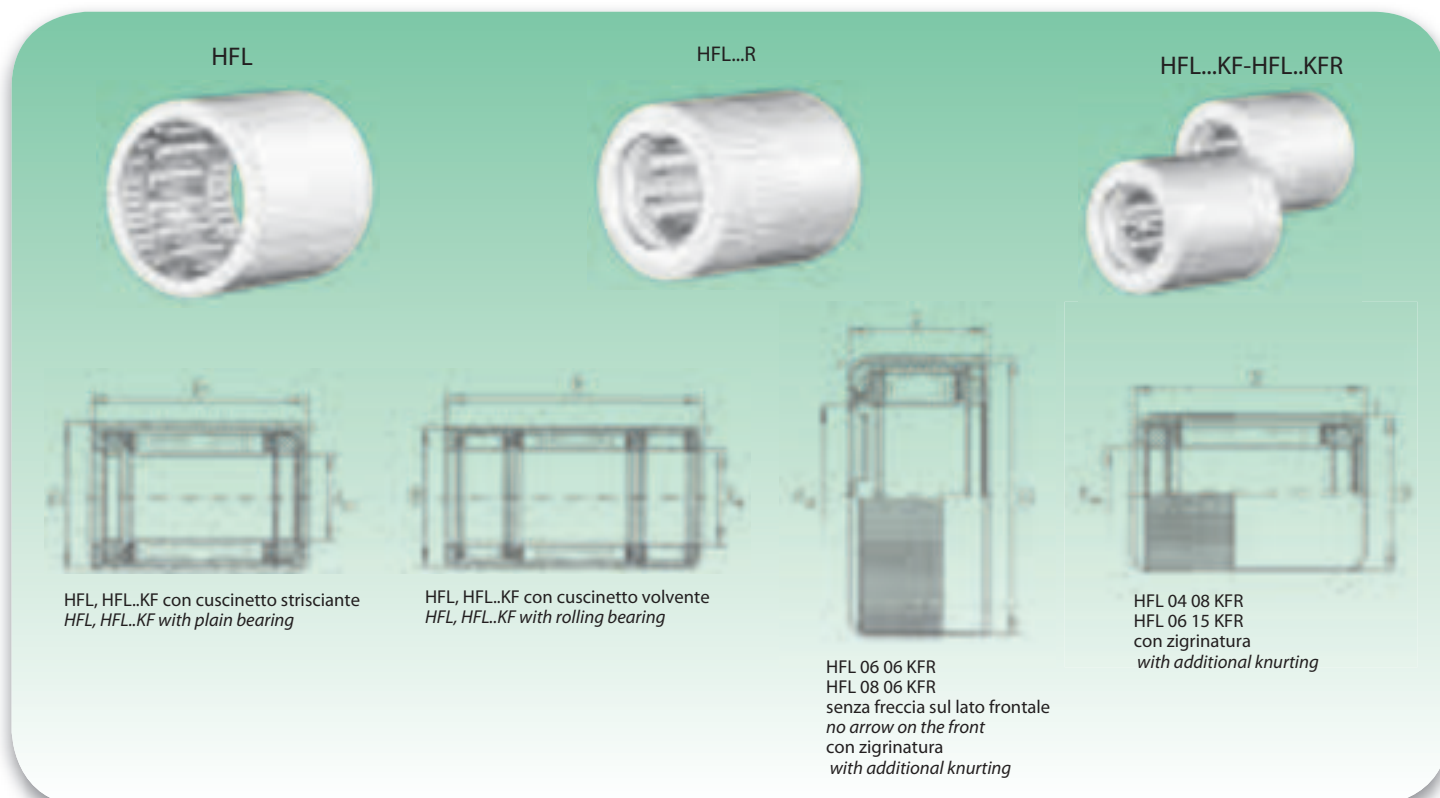
| Diametro albero (mm)<br>Shaft Diameter (mm) | Sigla<br>Designation             |                                     | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |     |           |           | Torsione<br>Torgue<br>$M_{dam}$<br>Nm | Velocità limite <sup>1)</sup><br>Limiting speed |                                 | Astucci a rullini utilizzabili come supporto radiale<br>Suitable drawn cup needle roller bearing |
|---|----------------------------------|-------------------------------------|------------------------|------------------------------------|-----|-----------|-----------|---------------------------------------|---|---------------------------------|--|
|   | Molla in acciaio<br>Steel Spring | Molla in plastica<br>Plastic Spring |                        | Fw                                 | D   | C<br>-0,3 | r<br>min. |                                       | $n_{GW}^2$<br>min <sup>-1</sup>                 | $n_{GA}^3$<br>min <sup>-1</sup> |  |
| 3   | -                                | <b>HF 0306 KF</b>                   | 1                      | 3                                  | 6.5 | 6         | 0.3       | 0.18                                  | 45 000  | 8 000                           | <b>HK 0306 TN</b>  |
|   | -                                | <b>HF 0306 KFR</b>                  | 1                      | 3                                  | 6.5 | 6         | 0.3       | 0.06                                  | 45 000  | 8 000                           | <b>HK 0306 TN</b>  |
| 4   | -                                | <b>HF 0406 KF</b>                   | 1                      | 4                                  | 8   | 6         | 0.3       | 0.34                                  | 34 000  | 8 000                           | <b>HK 0408</b>   |
|   | -                                | <b>HF 0406 KFR</b>                  | 1                      | 4                                  | 8   | 6         | 0.3       | 0.1                                   | 34 000  | 8 000                           | <b>HK 0408</b>   |
| 6   | <b>HF 0612</b>                   | <b>HF 0612 KF</b>                   | 3                      | 6                                  | 10  | 12        | 0.3       | 1.76                                  | 23 000  | 13 000                          | <b>HK 0608</b>   |
|   | <b>HF 0612 R</b>                 | <b>HF 0612 KFR</b>                  | 3                      | 6                                  | 10  | 12        | 0.3       | 0.6                                   | 23 000  | 13 000                          | <b>HK 0608</b>   |
| 8   | <b>HF 0812</b>                   | <b>HF 0812 KF</b>                   | 3.5                    | 8                                  | 12  | 12        | 0.3       | 3.15                                  | 17 000  | 12 000                          | <b>HK 0808</b>   |
|   | <b>HF 0812 R</b>                 | <b>HF 0812 KFR</b>                  | 3.5                    | 8                                  | 12  | 12        | 0.3       | 1                                     | 17 000  | 12 000                          | <b>HK 0808</b>   |
| 10  | <b>HF 1012</b>                   | <b>HF 1012 KF</b>                   | 4                      | 10                                 | 14  | 12        | 0.3       | 5.3                                   | 14 000  | 11 000                          | <b>HK 1010</b>   |
| 12  | <b>HF 1216</b>                   | -                                   | 11                     | 12                                 | 18  | 16        | 0.3       | 12.2                                  | 11 000  | 8 000                           | <b>HK 1212</b>   |
| 14  | <b>HF 1416</b>                   | -                                   | 13                     | 14                                 | 20  | 16        | 0.3       | 17.3                                  | 9 500   | 8 000                           | <b>HK 1412</b>   |
| 16  | <b>HF 1616</b>                   | -                                   | 14                     | 16                                 | 22  | 16        | 0.3       | 20.5                                  | 8 500   | 7 500                           | <b>HK 1612</b>   |
| 18  | <b>HF 1816</b>                   | -                                   | 16                     | 18                                 | 24  | 16        | 0.3       | 24.1                                  | 7 500   | 7 500                           | <b>HK 1812</b>   |
| 20  | <b>HF 2016</b>                   | -                                   | 17                     | 20                                 | 26  | 16        | 0.3       | 28.5                                  | 7 000   | 6 500                           | <b>HK 2010</b>   |
| 25  | <b>HF 2520</b>                   | -                                   | 30                     | 25                                 | 32  | 20        | 0.3       | 66                                    | 5 500   | 5 500                           | <b>HK 2512</b>   |
| 30  | <b>HF 3020</b>                   | -                                   | 36                     | 30                                 | 37  | 20        | 0.3       | 90                                    | 4 500   | 4 500                           | <b>HK 3012</b>   |
| 35  | <b>HF 3520</b>                   | -                                   | 40                     | 35                                 | 42  | 20        | 0.3       | 121                                   | 3 900   | 3 900                           | <b>HK 3512</b>   |

1) I numeri di giri limite valgono per lubrificazione a grasso e ad olio - Number of limiting revolutions are valid for both grease and oil lubrication.

2) Numero di giri limite per albero rotante - Number of limiting revolutions for rotating shaft.

3) Numero di giri limite per anello esterno rotante - Number of limiting revolutions for outer rotating ring.

Ulteriori misure in esecuzione speciale disponibili solo su specifica richiesta - Other sizes in special executions (available only under request)



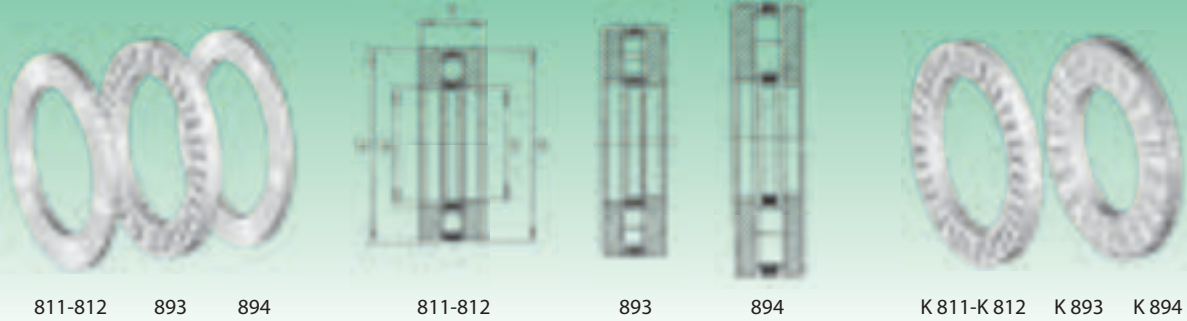
| Diametro albero (mm)<br>Shaft Diameter (mm) | Sigla<br>Designation             |  | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |     |           |           | Torsione<br>Torgue<br>M <sub>d amm</sub> Nm | Velocità limite <sup>1)</sup><br>Limiting speed    |  | Coefficienti di carico<br>Basic load ratings |                           |
|---|----------------------------------|--|------------------------|------------------------------------|-----|-----------|-----------|---|--|--|--|---------------------------|
|   | Molla in acciaio<br>Steel Spring | Molla in plastica<br>Plastic Spring      |                        | Fw                                 | D   | C<br>-0,3 | r<br>min. |   | n <sub>GW</sub> <sup>2)</sup><br>min <sup>-1</sup> | n <sub>GA</sub> <sup>3)</sup><br>min <sup>-1</sup> | din. C<br>dyn. C<br>N                        | stat. Co<br>stat. Co<br>N |
| 3   | -                                | <b>HFL 0308 KF</b>                       | 1.4                    | 3                                  | 6.5 | 8         | 0.3       | 0.18  | 45 000   | 8 000  | -  | -                         |
|   | -                                | <b>HFL 0308 KFR</b>                      | 1.4                    | 3                                  | 6.5 | 8         | 0.3       | 0.06  | 45 000   | 8 000  | -  | -                         |
| 4   | -                                | <b>HFL 0408 KF</b>                       | 1.6                    | 4                                  | 8   | 8         | 0.3       | 0.34  | 34 000   | 8 000  | -  | -                         |
|   | -                                | <b>HFL 0408 KFR</b>                      | 1.6                    | 4                                  | 8   | 8         | 0.3       | 0.1   | 34 000   | 8 000  | -  | -                         |
| 6   | -                                | <b>HFL 0606 KFR</b>                      | 1                      | 6                                  | 10  | 6         | 0.3       | 0.5   | 23 000   | 13 000   | -  | -                         |
|   |                                  | <b>HFL 0615</b><br><b>HFL 0615 KF</b>    | 4                      | 6                                  | 10  | 15        | 0.3       | 1.76  | 23 000   | 13 000   | -  | -                         |
|   |                                  | <b>HFL 0615 R</b><br><b>HFL 0615 KFR</b> | 4                      | 6                                  | 10  | 15        | 0.3       | 0.60  | 23 000   | 13 000   | -  | -                         |
| 8   | -                                | <b>HFL 0806 KFR</b>                      | 2                      | 8                                  | 12  | 6         | 0.3       | 0.7   | 17 000   | 12 000   | -  | -                         |
|   |                                  | <b>HFL 0822</b><br><b>HFL 0822 KF</b>    | 7                      | 8                                  | 12  | 22        | 0.3       | 3.15  | 17 000   | 12 000   | 3 650  | 3 950                     |
|   |                                  | <b>HFL 0822 R</b><br><b>HFL 0822 KFR</b> | 7                      | 8                                  | 12  | 22        | 0.3       | 1   | 17 000   | 12 000   | 3 650  | 3 950                     |
| 10  |                                  | <b>HFL 1022</b>                          | 8                      | 10                                 | 14  | 22        | 0.3       | 5.3   | 14 000   | 11 000   | 3 950  | 4 500                     |
| 12  |                                  | <b>HFL 1226</b>                          | 18                     | 12                                 | 18  | 26        | 0.3       | 12.2  | 11 000   | 8 000  | 6 300  | 6 700                     |
| 14  |                                  | <b>HFL 1426</b>                          | 20                     | 14                                 | 20  | 26        | 0.3       | 17.3  | 9 500  | 8 000  | 6 800  | 7 800                     |
| 16  |                                  | <b>HFL 1626</b>                          | 22                     | 16                                 | 22  | 26        | 0.3       | 20.5  | 8 500  | 7 500  | 7 400  | 9 000                     |
| 18  |                                  | <b>HFL 1826</b>                          | 25                     | 18                                 | 24  | 26        | 0.3       | 24.1  | 7 500  | 7 500  | 8 000  | 10 200                    |
| 20  |                                  | <b>HFL 2026</b>                          | 27                     | 20                                 | 26  | 26        | 0.3       | 28.5  | 7 000  | 6 500  | 8 500  | 11 400                    |
| 25  |                                  | <b>HFL 2530</b>                          | 44                     | 25                                 | 32  | 30        | 0.3       | 66  | 5 500  | 5 500  | 10 600                                       | 14 000                    |
| 30  |                                  | <b>HFL 3030</b>                          | 51                     | 30                                 | 37  | 30        | 0.3       | 90  | 4 500  | 4 500  | 11 600                                       | 16 900                    |
| 35  |                                  | <b>HFL 3530</b>                          | 58                     | 35                                 | 42  | 30        | 0.3       | 121   | 3 900  | 3 900  | 12 200                                       | 18 800                    |

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Ulteriori misure in esecuzione speciale disponibili solo su specifica richiesta - Other sizes in special executions (available only under request)



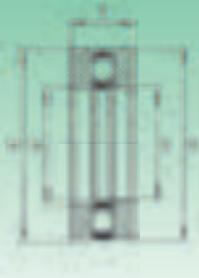
| Cuscinetti assiali a rulli cilindrici<br><i>Axial cylindrical roller bearings</i> |                                |                                |                                |                                | Gabbie assiali a rulli cilindrici<br><i>Axial cylindrical roller</i> |                      | Ralle per cuscinetti assiali<br><i>Axial bearing washers</i> |   |  |   |                                      |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|----------------------|--|---|--|---|--------------------------------------|
| Diametro<br>albero (mm)<br><i>Shaft<br/>diameter (mm)</i>                         | Sigla - Designation            |                                |                                |                                | Peso<br>(g)<br><i>Weight<br/>(g)</i>                                 | Sigla<br>Designation | Peso<br>(g)<br><i>Weight<br/>(g)</i>                         | Ralle per<br>alloggiamento<br><i>Housing<br/>locating<br/>washers</i> | Ralle per<br>albero<br><i>Shaft<br/>locating<br/>washers</i> | Ralle di<br>rotolamento<br><i>Bearing<br/>washers</i> | Peso<br>(g)<br><i>Weight<br/>(g)</i> |
|   | Serie 811<br><i>811 Series</i> | Serie 812<br><i>812 Series</i> | Serie 893<br><i>893 Series</i> | Serie 894<br><i>894 Series</i> |  |                      |  |   |  |   |                                      |
| <b>15</b>   | <b>811 02 TN</b>               |                                |                                |                                | 24   | <b>K811 02 TN</b>    | 6  | <b>GS811 02</b>   | <b>WS811 02</b>  | <b>LS1528</b>   | 8                                    |
| <b>17</b>   | <b>811 03 TN</b>               |                                |                                |                                | 27   | <b>K811 03 TN</b>    | 9  | <b>GS811 03</b>   | <b>WS811 03</b>  | <b>LS1730</b>   | 9                                    |
| <b>20</b>   | <b>811 04 TN</b>               |                                |                                |                                | 37   | <b>K811 04 TN</b>    | 13   | <b>GS811 04</b>   | <b>WS811 04</b>  | <b>LS2035</b>   | 12                                   |
| <b>25</b>   | <b>811 05 TN</b>               |                                |                                |                                | 53   | <b>K811 05 TN</b>    | 15   | <b>GS811 05</b>   | <b>WS811 05</b>  | <b>LS2542</b>   | 19                                   |
| <b>30</b>   | <b>811 06 TN</b>               |                                |                                |                                | 57   | <b>K811 06 TN</b>    | 17   | <b>GS811 06</b>   | <b>WS811 06</b>  | <b>LS3047</b>   | 20                                   |
|   |                                | <b>812 06 TN</b>               |                                |                                | 123  | <b>K812 06 TN</b>    | 33   | <b>GS812 06</b>   | <b>WS812 06</b>  | —   | 45                                   |
|   |                                |                                | <b>893 06 TN</b>               |                                | 240  | <b>K893 06 TN</b>    | 40   | <b>GS893 06</b>   | <b>WS893 06</b>  | —   | 95                                   |
| <b>35</b>   | <b>811 07 TN</b>               |                                |                                |                                | 73   | <b>K811 07 TN</b>    | 19   | <b>GS811 07</b>   | <b>WS811 07</b>  | <b>LS3552</b>   | 27                                   |
|   |                                | <b>812 07 TN</b>               |                                |                                | 195  | <b>K812 07 TN</b>    | 43   | <b>GS812 07</b>   | <b>WS812 07</b>  | —   | 76                                   |
|   |                                |                                | <b>893 07 TN</b>               |                                | 340  | <b>K893 07 TN</b>    | 53   | <b>GS893 07</b>   | <b>WS893 07</b>  | —   | 134                                  |
| <b>40</b>   | <b>811 08 TN</b>               |                                |                                |                                | 105  | <b>K811 08 TN</b>    | 31   | <b>GS811 08</b>   | <b>WS811 08</b>  | <b>LS4060</b>   | 37                                   |
|   |                                | <b>812 08 TN</b>               |                                |                                | 249  | <b>K812 08 TN</b>    | 81   | <b>GS812 08</b>   | <b>WS812 08</b>  | —   | 84                                   |
|   |                                |                                | <b>893 08 TN</b>               |                                | 484  | <b>K893 08 TN</b>    | 98   | <b>GS893 08</b>   | <b>WS893 08</b>  | —   | 193                                  |
| <b>45</b>   | <b>811 09 TN</b>               |                                |                                |                                | 130  | <b>K811 09 TN</b>    | 35   | <b>GS811 09</b>   | <b>WS811 09</b>  | <b>LS4565</b>   | 47                                   |
|   |                                | <b>812 09 TN</b>               |                                |                                | 287  | <b>K812 09 TN</b>    | 85   | <b>GS812 09</b>   | <b>WS812 09</b>  | —   | 101                                  |
|   |                                |                                | <b>893 09 TN</b>               |                                | 615  | <b>K893 09 TN</b>    | 121  | <b>GS893 09</b>   | <b>WS893 09</b>  | —   | 247                                  |
| <b>50</b>   | <b>811 10 TN</b>               |                                |                                |                                | 140  | <b>K811 10 TN</b>    | 38   | <b>GS811 10</b>   | <b>WS811 10</b>  | <b>LS5070</b>   | 51                                   |
|   |                                | <b>812 10 TN</b>               |                                |                                | 356  | <b>K812 10 TN</b>    | 98   | <b>GS812 10</b>   | <b>WS812 10</b>  | —   | 129                                  |
|   |                                |                                | <b>893 10 TN</b>               |                                | 887  | <b>K893 10 TN</b>    | 175  | <b>GS893 10</b>   | <b>WS893 10</b>  | —   | 356                                  |
| <b>55</b>   | <b>811 11 TN</b>               |                                |                                |                                | 218  | <b>K811 11 TN</b>    | 45   | <b>GS811 11</b>   | <b>WS811 11</b>  | <b>LS5578</b>   | 82                                   |
|   |                                | <b>812 11 TN</b>               |                                |                                | 568  | <b>K812 11 TN</b>    | 166  | <b>GS812 11</b>   | <b>WS812 11</b>  | —   | 201                                  |
|   |                                |                                | <b>893 11 TN</b>               |                                | 118  | <b>K893 11 TN</b>    | 195  | <b>GS893 11</b>   | <b>WS893 11</b>  | —   | 485                                  |
| <b>60</b>   | <b>811 12 TN</b>               |                                |                                |                                | 266  | <b>K811 12 TN</b>    | 82   | <b>GS811 12</b>   | <b>WS811 12</b>  | <b>LS6085</b>   | 92                                   |
|   |                                | <b>812 12 TN</b>               |                                |                                | 642  | <b>K812 12 TN</b>    | 176  | <b>GS812 12</b>   | <b>WS812 12</b>  | —   | 233                                  |
|   |                                |                                | <b>893 12 TN</b>               |                                | 126  | <b>K893 12 TN</b>    | 210  | <b>GS893 12</b>   | <b>WS893 12</b>  | —   | 517                                  |
|   |                                |                                |                                | <b>894 12 TN</b>               | 2 818  | <b>K894 12 TN</b>    | 538  | <b>GS894 12</b>   | <b>WS894 12</b>  | —   | 1 115                                |



| Dimensioni (mm)<br>Dimensions (mm) |                |                     |                |    |                |      | Coefficienti di carico (N)<br>Basic load ratings (N) |   | Velocità limite<br>Limiting Speed   |
|------------------------------------|----------------|---------------------|----------------|----|----------------|------|--|---|-------------------------------------|
| D <sub>c1</sub><br>d               | D <sub>1</sub> | D<br>D <sub>c</sub> | d <sub>1</sub> | T  | D <sub>w</sub> | B    | Dinamico C<br>Dynamic C                              | Statico C <sub>s</sub><br>Static C <sub>s</sub> | Olio (N. giri max)<br>Oil (max rpm) |
| 15                                 | 16             | 28                  | 28             | 9  | 3.5            | 2.75 | 13 500   | 28 000  | 12 350                              |
| 17                                 | 18             | 30                  | 30             | 9  | 3.5            | 2.75 | 15 100   | 32 900  | 11 400                              |
| 20                                 | 21             | 35                  | 35             | 10 | 4.5            | 2.75 | 23 700   | 52 600  | 9 500                               |
| 25                                 | 26             | 42                  | 42             | 11 | 5              | 3    | 32 900   | 72 000  | 8 000                               |
| 30                                 | 32             | 47                  | 47             | 11 | 5              | 3    | 34 800   | 85 000  | 7 100                               |
| 30                                 | 32             | 52                  | 52             | 16 | 7.5            | 4.25 | 63 500   | 139 000   | 6 650                               |
| 30                                 | 32             | 60                  | 60             | 18 | 5.5            | 6.25 | 67 900   | 188 500   | 6 200                               |
| 35                                 | 37             | 52                  | 52             | 12 | 5              | 3.5  | 38 500   | 100 900   | 6 200                               |
| 35                                 | 37             | 62                  | 62             | 18 | 7.5            | 5.25 | 79 800   | 198 100   | 5 700                               |
| 35                                 | 37             | 68                  | 68             | 20 | 6              | 7    | 79 800   | 236 500   | 5 200                               |
| 40                                 | 42             | 60                  | 60             | 13 | 6              | 3.5  | 55 000   | 147 500   | 5 700                               |
| 40                                 | 42             | 68                  | 68             | 19 | 9              | 5    | 106 500  | 264 600   | 5 200                               |
| 40                                 | 42             | 78                  | 78             | 22 | 7              | 7.5  | 119 000  | 384 500   | 4 700                               |
| 45                                 | 47             | 65                  | 65             | 14 | 6              | 4    | 58 500   | 162 500   | 4 750                               |
| 45                                 | 47             | 73                  | 73             | 20 | 9              | 5.5  | 104 500  | 264 100   | 4 700                               |
| 45                                 | 47             | 85                  | 85             | 24 | 7.5            | 8.25 | 138 500  | 439 000   | 4 200                               |
| 50                                 | 52             | 70                  | 70             | 14 | 6              | 4    | 60 700   | 167 000   | 4 500                               |
| 50                                 | 52             | 78                  | 78             | 22 | 9              | 6.5  | 106 000  | 309 000   | 4 300                               |
| 50                                 | 52             | 95                  | 95             | 27 | 8              | 9.5  | 166 500  | 557 900   | 3 800                               |
| 55                                 | 57             | 78                  | 78             | 16 | 6              | 5    | 87 900   | 298 700   | 4 100                               |
| 55                                 | 57             | 90                  | 90             | 25 | 11             | 7    | 153 100  | 404 500   | 3 800                               |
| 55                                 | 57             | 105                 | 105            | 30 | 9              | 10.5 | 183 200  | 599 800   | 3 500                               |
| 60                                 | 62             | 85                  | 85             | 17 | 7.5            | 4.75 | 102 100  | 309 500   | 3 800                               |
| 60                                 | 62             | 95                  | 95             | 26 | 11             | 7.5  | 171 100  | 478 000   | 3 500                               |
| 60                                 | 62             | 110                 | 110            | 30 | 9              | 10.5 | 195 100  | 669 800   | 3 200                               |
| 60                                 | 62             | 130                 | 130            | 42 | 14             | 14   | 388 000  | 1 219 500                                       | 2 850                               |



811-812    893    894



811-812



893



894



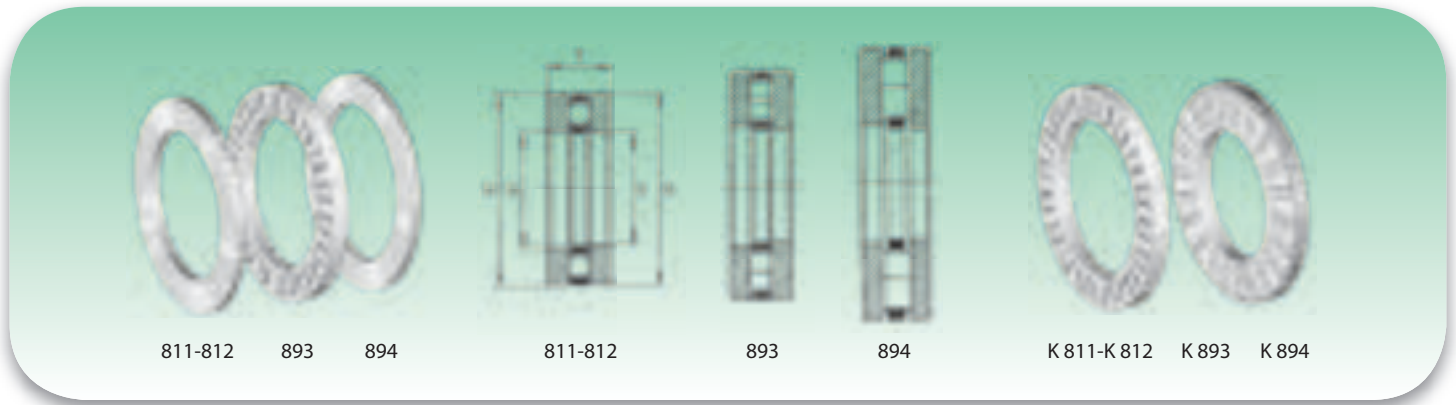
K 811-K 812    K 893    K 894

| Cuscinetti assiali a rulli cilindrici<br><i>Axial cylindrical roller bearings</i> |                                |                                |                                |                                | Gabbie assiali a rulli cilindrici<br><i>Axial cylindrical roller</i> |                             | Ralle per cuscinetti assiali<br><i>Axial bearing washers</i> |   |  |   |                                      |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|-----------------------------|--|---|--|---|--------------------------------------|
| Diametro<br>albero (mm)<br><i>Shaft<br/>diameter (mm)</i>                         | Sigla - Designation            |                                |                                |                                | Peso<br>(g)<br><i>Weight<br/>(g)</i>                                 | Sigla<br><i>Designation</i> | Peso<br>(g)<br><i>Weight<br/>(g)</i>                         | Ralle per<br>alloggiamento<br><i>Housing<br/>locating<br/>washers</i> | Ralle per<br>albero<br><i>Shaft<br/>locating<br/>washers</i> | Ralle di<br>rotolamento<br><i>Bearing<br/>washers</i> | Peso<br>(g)<br><i>Weight<br/>(g)</i> |
|   | Serie 811<br><i>811 Series</i> | Serie 812<br><i>812 Series</i> | Serie 893<br><i>893 Series</i> | Serie 894<br><i>894 Series</i> |  |                             |  |   |  |   |                                      |
| 65  | 811 13 TN                      |                                |                                |                                | 310  | K811 13 TN                  | 90   | GS811 13  | WS811 13   | LS 6590   | 110                                  |
|   |                                | 812 13 TN                      |                                |                                | 721  | K812 13 TN                  | 185  | GS812 13  | WS812 13   | —   | 268                                  |
|   |                                |                                | 893 13 TN                      |                                | 1 330  | K893 13 TN                  | 210  | GS893 13  | WS893 13   | —   | 535                                  |
|   |                                |                                |                                | 894 13 TN                      | 3 520  | K894 13 TN                  | 720  | GS894 13  | WS894 13   | —   | 1 400                                |
| 70  | 811 14 TN                      |                                |                                |                                | 332  | K811 14 TN                  | 92   | GS811 14  | WS811 14   | LS 7095   | 120                                  |
|   |                                | 812 14 TN                      |                                |                                | 768  | K812 14 TN                  | 212  | GS812 14  | WS812 14   | —   | 278                                  |
|   |                                |                                | 893 14 TN                      |                                | 1 820  | K893 14 TN                  | 290  | GS893 14  | WS893 14   | —   | 800                                  |
|   |                                |                                |                                | 894 14 TN                      | 4 180  | K894 14 TN                  | 920  | GS894 14  | WS894 14   | —   | 1 730                                |
| 75  | 811 15 TN                      |                                |                                |                                | 393  | K811 15 TN                  | 96   | GS811 15  | WS811 15   | LS 75100  | 136                                  |
|   |                                | 812 15 TN                      |                                |                                | 800  | K812 15 TN                  | 195  | GS812 15  | WS812 15   | —   | 293                                  |
|   |                                |                                | 893 15 TN                      |                                | 2 230  | K893 15 TN                  | 375  | GS893 15  | WS893 15   | —   | 970                                  |
|   |                                |                                |                                | 894 15-M                       | 5 250  | K894 15-M                   | 1 070  | GS894 15  | WS894 15   | —   | 2 090                                |
| 80  | 811 16 TN                      |                                |                                |                                | 400  | K811 16 TN                  | 95   | GS811 16  | WS811 16   | LS 80105  | 144                                  |
|   |                                | 812 16 TN                      |                                |                                | 900  | K812 16 TN                  | 234  | GS812 16  | WS812 16   | —   | 333                                  |
|   |                                |                                | 893 16 TN                      |                                | 2 370  | K893 16 TN                  | 420  | GS893 16  | WS893 16   | —   | 1 020                                |
|   |                                |                                |                                | 894 16-M                       | 6 410  | K894 16-M                   | 1 410  | GS894 16  | WS894 16   | —   | 2 500                                |
| 85  | 811 17 TN                      |                                |                                |                                | 420  | K811 17 TN                  | 118  | GS811 17  | WS811 17   | LS 85110  | 151                                  |
|   |                                | 812 17 TN                      |                                |                                | 1 260  | K812 17 TN                  | 280  | GS812 17  | WS812 17   | —   | 490                                  |
|   |                                |                                | 893 17-M                       |                                | 3 000  | K893 17-M                   | 540  | GS893 17  | WS893 17   | —   | 1 230                                |
|   |                                |                                |                                | 894 17-M                       | 7 550  | K894 17-M                   | 1 610  | GS894 17  | WS894 17   | —   | 2 970                                |
| 90  | 811 18 TN                      |                                |                                |                                | 620  | K811 18 TN                  | 150  | GS811 18  | WS811 18   | LS 90120  | 225                                  |
|   |                                | 812 18 TN                      |                                |                                | 1 770  | K812 18 TN                  | 542  | GS812 18  | WS812 18   | —   | 614                                  |
|   |                                |                                | 893 18-M                       |                                | 3 280  | K893 18-M                   | 620  | GS893 18  | WS893 18   | —   | 1 330                                |
|   |                                |                                |                                | 894 18-M                       | 8 770  | K894 18-M                   | 1 870  | GS894 18  | WS894 18   | —   | 3 450                                |
| 100   | 811 20 TN                      |                                |                                |                                | 950  | K811 20 TN                  | 250  | GS811 20  | WS811 20   | LS 100135   | 350                                  |
|   |                                | 812 20                         |                                |                                | 2 200  | K812 20                     | 600  | GS812 20  | WS812 20   | —   | 800                                  |
|   |                                |                                | 893 20-M                       |                                | 4 190  | K893 20-M                   | 810  | GS893 20  | WS893 20   | —   | 1 690                                |
|   |                                |                                |                                | 894 20-M                       | 11 900   | K894 20-M                   | 2 400  | GS894 20  | WS894 20   | —   | 4 750                                |

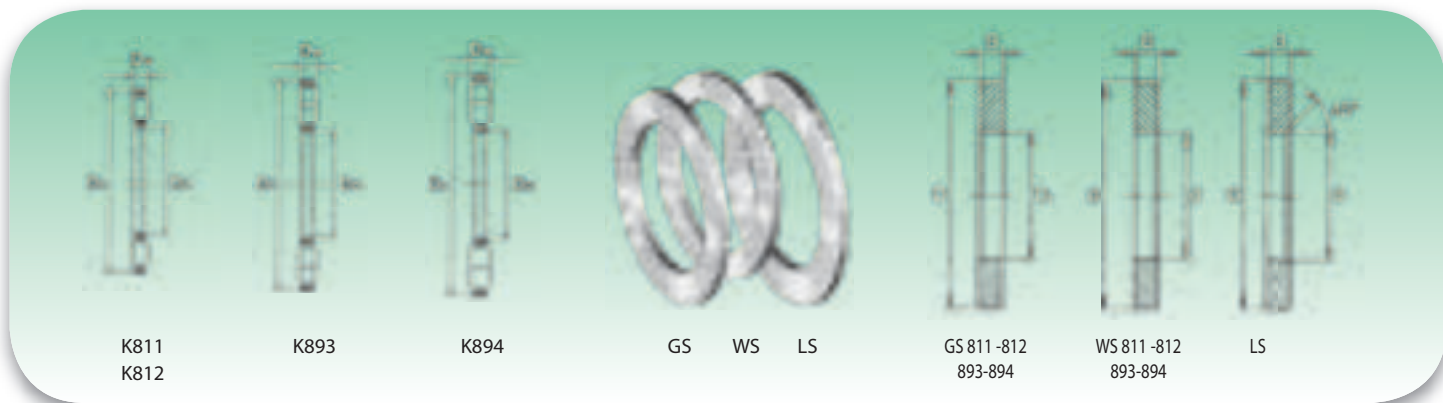


| Dimensioni (mm)<br>Dimensions (mm) |       |            |       |    |       |      | Coefficienti di carico (N)<br>Basic load ratings (N) |                               | Velocità limite<br>Limiting Speed   |
|------------------------------------|-------|------------|-------|----|-------|------|--|-------------------------------|-------------------------------------|
| $D_{c1}$<br>d                      | $D_1$ | D<br>$D_c$ | $d_1$ | T  | $D_w$ | B    | Dinamico C<br>Dynamic C                              | Statico $C_0$<br>Static $C_0$ | Olio (N. giri max)<br>Oil (max rpm) |
| 65                                 | 67    | 90         | 90    | 18 | 7,5   | 5,25 | 106 500  | 339 500                       | 3 500                               |
| 65                                 | 67    | 100        | 100   | 27 | 11    | 8    | 176 800  | 499 500                       | 3 300                               |
| 65                                 | 67    | 115        | 115   | 30 | 9     | 10,5 | 193 500  | 667 900                       | 3 000                               |
| 65                                 | 68    | 140        | 140   | 45 | 15    | 15   | 444 000  | 1 396 000                     | 2 700                               |
| 70                                 | 72    | 95         | 95    | 18 | 7,5   | 5,25 | 110 800  | 364 500                       | 3 300                               |
| 70                                 | 72    | 105        | 105   | 27 | 11    | 8    | 186 000  | 549 700                       | 3 100                               |
| 70                                 | 72    | 125        | 125   | 34 | 10    | 12   | 238 500  | 829 600                       | 2 850                               |
| 70                                 | 73    | 150        | 150   | 48 | 16    | 16   | 449 800  | 1 389 500                     | 2 500                               |
| 75                                 | 77    | 100        | 100   | 19 | 7,5   | 5,75 | 104 500  | 339 600                       | 3 100                               |
| 75                                 | 77    | 110        | 110   | 27 | 11    | 8    | 171 500  | 498 700                       | 2 900                               |
| 75                                 | 77    | 135        | 135   | 36 | 11    | 12,5 | 284 800  | 1 009 000                     | 2 600                               |
| 75                                 | 78    | 160        | 160   | 51 | 17    | 17   | 499 600  | 1 579 800                     | 2 350                               |
| 80                                 | 82    | 105        | 105   | 19 | 7,5   | 5,75 | 105 800  | 348 800                       | 2 900                               |
| 80                                 | 82    | 115        | 115   | 28 | 11    | 8,5  | 200 600  | 629 600                       | 2 850                               |
| 80                                 | 82    | 140        | 140   | 36 | 11    | 12,5 | 304 500  | 1 109 800                     | 2 500                               |
| 80                                 | 83    | 170        | 170   | 54 | 18    | 18   | 559 600  | 1 769 500                     | 2 200                               |
| 85                                 | 87    | 110        | 110   | 19 | 7,5   | 5,75 | 111 900  | 369 600                       | 2 850                               |
| 85                                 | 88    | 125        | 125   | 31 | 12    | 9,5  | 216 500  | 659 700                       | 2 600                               |
| 85                                 | 88    | 150        | 150   | 39 | 12    | 13,5 | 324 600  | 1 099 600                     | 2 400                               |
| 85                                 | 88    | 180        | 180   | 58 | 19    | 19,5 | 619 500  | 1 979 800                     | 2 100                               |
| 90                                 | 92    | 120        | 120   | 22 | 9     | 6,5  | 140 600  | 459 000                       | 2 550                               |
| 90                                 | 93    | 135        | 135   | 35 | 14    | 10,5 | 288 900  | 886 900                       | 2 450                               |
| 90                                 | 93    | 155        | 155   | 39 | 12    | 13,5 | 329 500  | 1 199 400                     | 2 300                               |
| 90                                 | 93    | 190        | 190   | 60 | 20    | 20   | 678 900  | 2 199 600                     | 2 000                               |
| 100                                | 102   | 135        | 135   | 25 | 11    | 7    | 197 000  | 649 800                       | 2 400                               |
| 100                                | 103   | 150        | 150   | 38 | 15    | 11,5 | 279 800  | 839 600                       | 2 200                               |
| 100                                | 103   | 170        | 170   | 42 | 13    | 14,5 | 379 500  | 1 399 500                     | 2 000                               |
| 100                                | 103   | 210        | 210   | 67 | 22    | 22,5 | 849 000  | 2 847 900                     | 1 800                               |



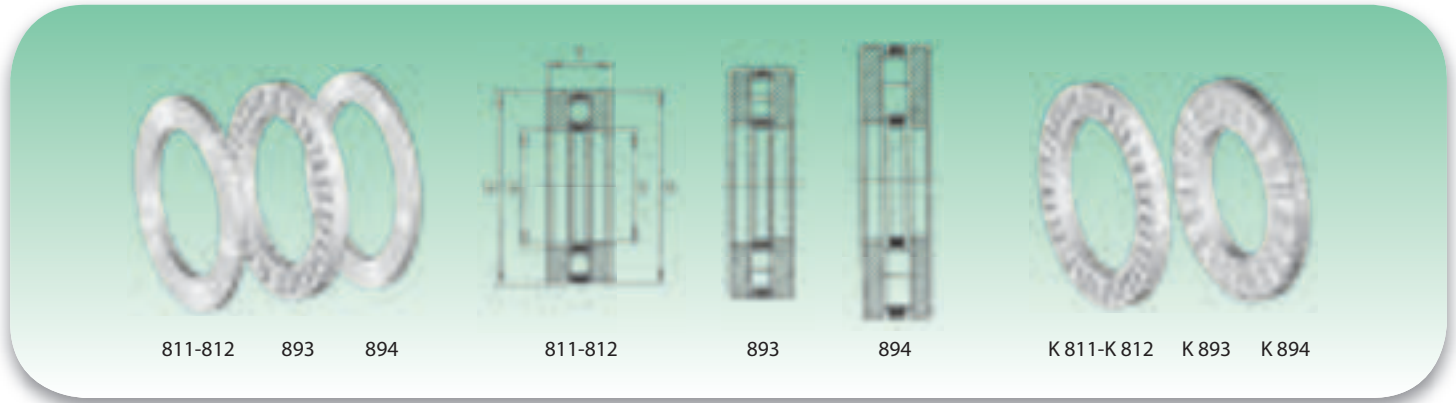


| Cuscinetti assiali a rulli cilindrici<br><i>Axial cylindrical roller bearings</i> |                                |                                |                                |                                | Gabbie assiali a rulli cilindrici<br><i>Axial cylindrical roller</i> |                             | Ralle per cuscinetti assiali<br><i>Axial bearing washers</i> |  |   |  |                               |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|-----------------------------|--|--|---|--|-------------------------------|
| Diametro albero (mm)<br><i>Shaft diameter (mm)</i>                                | Sigla - Designation            |                                |                                |                                | Peso (g)<br><i>Weight (g)</i>  | Sigla<br><i>Designation</i> | Peso (g)<br><i>Weight (g)</i>                                | Ralle per alloggiamento<br><i>Housing locating washers</i> | Ralle per albero<br><i>Shaft locating washers</i> | Ralle di rotolamento<br><i>Bearing washers</i> | Peso (g)<br><i>Weight (g)</i> |
|   | Serie 811<br><i>811 Series</i> | Serie 812<br><i>812 Series</i> | Serie 893<br><i>893 Series</i> | Serie 894<br><i>894 Series</i> |  |                             |  |  |   |  |                               |
| 110   | 811 22 TN                      |                                |                                |                                | 1 040  | K811 22 TN                  | 270  | GS811 22   | WS811 22  | LS 110145                                      | 385                           |
|   |                                | 812 22 TN                      |                                |                                | 2 445  | K812 22 TN                  | 685  | GS812 22   | WS812 22  | —  | 880                           |
|   |                                |                                | 893 22 - M                     |                                | 6 030  | K893 22 - M                 | 1 150  | GS893 22   | WS893 22  | —  | 2 440                         |
|   |                                |                                |                                | 894 22 - M                     | 15 600   | K894 22 - M                 | 3 300  | GS894 22   | WS894 22  | —  | 6 150                         |
| 120   | 811 24 TN                      |                                |                                |                                | 1 170  | K811 24 TN                  | 340  | GS811 24   | WS811 24  | LS 120155                                      | 415                           |
|   |                                | 812 24 TN                      |                                |                                | 2 690  | K812 24 TN                  | 730  | GS812 24   | WS812 24  | —  | 980                           |
|   |                                |                                | 893 24 - M                     |                                | 8 520  | K893 24 - M                 | 1 720  | GS893 24   | WS893 24  | —  | 3 400                         |
|   |                                |                                |                                | 894 24 - M                     | 19 700   | K894 24 - M                 | 4 300  | GS894 24   | WS894 24  | —  | 7 700                         |
| 130   | 811 26 TN                      |                                |                                |                                | 1 700  | K811 26 TN                  | 414  | GS811 26   | WS811 26  | LS 130170                                      | 643                           |
|   |                                | 812 26 TN                      |                                |                                | 4 204  | K812 26 TN                  | 1 144  | GS812 26   | WS812 26  | —  | 1 530                         |
|   |                                |                                | 893 26 - M                     |                                | 10 000   | K893 26 - M                 | 1 910  | GS893 26   | WS893 26  | —  | 4 045                         |
|   |                                |                                |                                | 894 26 - M                     | 24 000   | K894 26 - M                 | 5 000  | GS894 26   | WS894 26  | —  | 9 500                         |
| 140   | 811 28 TN                      |                                |                                |                                | 1 946  | K811 28 TN                  | 448  | GS811 28   | WS811 28  | LS 140180                                      | 749                           |
|   |                                | 812 28 - M                     |                                |                                | 4 567  | K812 28 - M                 | 1 197  | GS812 28   | WS812 28  | —  | 1 635                         |
|   |                                |                                | 893 28 - M                     |                                | 11 990   | K893 28 - M                 | 2 390  | GS893 28   | WS893 28  | —  | 4 800                         |
|   |                                |                                |                                | 894 28 - M                     | 27 200   | K894 28 - M                 | 6 000  | GS894 28   | WS894 28  | —  | 10 600                        |
| 150   | 811 30 TN                      |                                |                                |                                | 2 066  | K811 30 TN                  | 474  | GS811 30   | WS811 30  | LS 150190                                      | 796                           |
|   |                                | 812 30 - M                     |                                |                                | 5 886  | K812 30 TN                  | 1 520  | GS812 30   | WS812 30  | —  | 2 180                         |
|   |                                |                                | 893 30 - M                     |                                | 12 630   | K893 30 - M                 | 2 510  | GS893 30   | WS893 30  | —  | 5 060                         |
|   |                                |                                |                                | 894 30 - M                     | 32 100   | K894 30 - M                 | 7 100  | GS894 30   | WS894 30  | —  | 12 500                        |
| 160   | 811 32 TN                      |                                |                                |                                | 2 189  | K811 32 TN                  | 505  | GS811 32   | WS811 32  | LS 160200                                      | 842                           |
|   |                                | 812 32 - M                     |                                |                                | 6 203  | K812 32 - M                 | 1 603  | GS812 32   | WS812 32  | —  | 2 300                         |
|   |                                |                                |                                | 894 32 - M                     | 38 200   | K894 32 - M                 | 8 600  | GS894 32   | WS894 32  | —  | 14 800                        |
| 170   | 811 34 TN                      |                                |                                |                                | 2 950  | K811 34 TN                  | 750  | GS811 34   | WS811 34  | —  | 1 100                         |
|   |                                | 812 34 - M                     |                                |                                | 7 690  | K812 34 - M                 | 1 890  | GS812 34   | WS812 34  | —  | 2 900                         |
|   |                                |                                |                                | 894 34 - M                     | 47 200   | K894 34 - M                 | 10 200   | GS894 34   | WS894 34  | —  | 18 500                        |



| Dimensioni (mm)<br>Dimensions (mm) |                |                     |                |     |                |      | Coefficienti di carico (N)<br>Basic load ratings (N) |   | Velocità limite<br>Limiting Speed   |
|------------------------------------|----------------|---------------------|----------------|-----|----------------|------|--|---|-------------------------------------|
| D <sub>c1</sub><br>d               | D <sub>1</sub> | D<br>D <sub>c</sub> | d <sub>1</sub> | T   | D <sub>w</sub> | B    | Dinamico C<br>Dynamic C                              | Statico C <sub>0</sub><br>Static C <sub>0</sub> | Olio (N. giri max)<br>Oil (max rpm) |
| 110                                | 112            | 145                 | 145            | 25  | 11             | 7    | 206 850  | 699 200   | 2 200                               |
| 110                                | 113            | 160                 | 160            | 38  | 15             | 11.5 | 299 800  | 939 700   | 2 000                               |
| 110                                | 113            | 190                 | 190            | 48  | 15             | 16.5 | 499 500  | 1 867 900                                       | 1 800                               |
| 110                                | 113            | 230                 | 230            | 73  | 24             | 24.5 | 998 500  | 3 397 800                                       | 1 600                               |
| 120                                | 122            | 155                 | 155            | 25  | 11             | 7    | 202 700  | 698 900   | 2 000                               |
| 120                                | 123            | 170                 | 170            | 39  | 15             | 12   | 309 600  | 979 600   | 1 900                               |
| 120                                | 123            | 210                 | 210            | 54  | 17             | 18.5 | 639 500  | 2 417 600                                       | 1 600                               |
| 120                                | 123            | 250                 | 250            | 78  | 26             | 26   | 1 159 500  | 3 987 900                                       | 1 500                               |
| 130                                | 132            | 170                 | 170            | 30  | 12             | 9    | 232 700  | 809 600   | 1 800                               |
| 130                                | 133            | 190                 | 187            | 45  | 19             | 13   | 424 500  | 1 287 900                                       | 1 700                               |
| 130                                | 134            | 225                 | 225            | 58  | 18             | 20   | 709 600  | 2 697 900                                       | 1 500                               |
| 130                                | 134            | 270                 | 270            | 85  | 28             | 28.5 | 1 329 700  | 4 599 800                                       | 1 350                               |
| 140                                | 142            | 180                 | 178            | 31  | 12             | 9.5  | 241 800  | 865 900   | 1 700                               |
| 140                                | 143            | 200                 | 197            | 46  | 19             | 13.5 | 444 500  | 1 449 700                                       | 1 600                               |
| 140                                | 144            | 240                 | 240            | 60  | 19             | 20.5 | 819 700  | 3 198 900                                       | 1 400                               |
| 140                                | 144            | 280                 | 280            | 85  | 28             | 28.5 | 1 379 600  | 4 949 800                                       | 1 300                               |
| 150                                | 152            | 190                 | 188            | 31  | 12             | 9.5  | 249 600  | 929 700   | 1 600                               |
| 150                                | 153            | 215                 | 212            | 50  | 21             | 14.5 | 589 600  | 1 938 900                                       | 1 500                               |
| 150                                | 154            | 250                 | 250            | 60  | 19             | 20.5 | 837 900  | 3 347 900                                       | 1 300                               |
| 150                                | 154            | 300                 | 300            | 90  | 30             | 30   | 1 569 500  | 5 698 900                                       | 1 200                               |
| 160                                | 162            | 200                 | 198            | 31  | 12             | 9.5  | 259 600  | 989 600   | 1 500                               |
| 160                                | 163            | 225                 | 222            | 51  | 21             | 15   | 599 500  | 2 028 900                                       | 1 400                               |
| 160                                | 164            | 320                 | 320            | 95  | 32             | 31.5 | 1 778 600  | 6 498 800                                       | 1 100                               |
| 170                                | 172            | 215                 | 213            | 34  | 14             | 10   | 324 600  | 1 215 700                                       | 1 400                               |
| 170                                | 173            | 240                 | 237            | 55  | 22             | 16.5 | 679 900  | 2 339 500                                       | 1 300                               |
| 170                                | 174            | 340                 | 340            | 103 | 34             | 34.5 | 1 989 900  | 7 399 850                                       | 1 000                               |



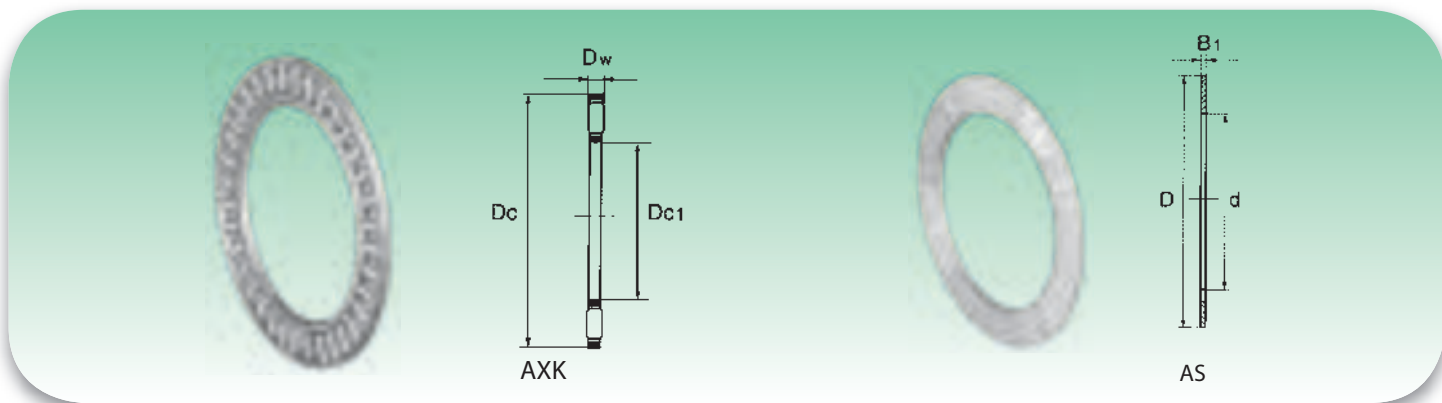


| Cuscinetti assiali a rulli cilindrici<br><i>Axial cylindrical roller bearings</i> |                                |                                |                                |                                | Gabbie assiali a rulli cilindrici<br><i>Axial cylindrical roller</i> |                                | Ralle per cuscinetti assiali<br><i>Axial bearing washers</i> |  |   |                               |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|--------------------------------|--|--|---|-------------------------------|
| Diametro albero (mm)<br><i>Shaft diameter (mm)</i>                                | Sigla - Designation            |                                |                                |                                | Peso (g)<br><i>Weight (g)</i>  | Sigla Designation              | Peso (g)<br><i>Weight (g)</i>                                | Ralle per alloggiamento<br><i>Housing locating washers</i> | Ralle per albero<br><i>Shaft locating washers</i> | Peso (g)<br><i>Weight (g)</i> |
|   | Serie 811<br><i>811 Series</i> | Serie 812<br><i>812 Series</i> | Serie 893<br><i>893 Series</i> | Serie 894<br><i>894 Series</i> |  |                                |  |  |   |                               |
| <b>180</b>  | <b>811 36 - M</b>              |                                |                                |                                | 3 040  | <b>K811 36 - M</b>             | 800  | <b>GS811 36</b>  | <b>WS811 36</b>                                   | 1 120                         |
|   |                                | <b>812 36 - M</b>              |                                |                                | 8 240  | <b>K812 36 - M</b>             | 1 980  | <b>GS812 36</b>  | <b>WS812 36</b>                                   | 3 130                         |
|   |                                |                                |                                | <b>894 36 - M</b>              | 54 800   | <b>K894 36 - M</b>             | 12 200   | <b>GS894 36</b>  | <b>WS894 36</b>                                   | 21 300                        |
| <b>190</b>  | <b>811 38 - M</b>              |                                |                                |                                | 3 840  | <b>K811 38 - M</b>             | 940  | <b>GS811 38</b>  | <b>WS811 38</b>                                   | 1 450                         |
|   |                                | <b>812 38 - M</b>              |                                |                                | 10 400   | <b>K812 38 - M</b>             | 2 730  | <b>GS812 38</b>  | <b>WS812 38</b>                                   | 3 835                         |
|   |                                |                                |                                | <b>894 38 - M</b>              | 65 700   | <b>K894 38 - M</b>             | 14 500   | <b>GS894 38</b>  | <b>WS894 38</b>                                   | 25 600                        |
| <b>200</b>  | <b>811 40 - M</b>              |                                |                                |                                | 4 000  | <b>K811 40 - M</b>             | 980  | <b>GS811 40</b>  | <b>WS811 40</b>                                   | 1 510                         |
|   |                                | <b>812 40 - M</b>              |                                |                                | 11 910   | <b>K812 40 - M</b>             | 3 090  | <b>GS812 40</b>  | <b>WS812 40</b>                                   | 4 410                         |
|   |                                |                                |                                | <b>894 40 - M</b>              | 74 800   | <b>K894 40 - M</b>             | 16 200   | <b>GS894 40</b>  | <b>WS894 40</b>                                   | 29 300                        |
| <b>220</b>  | <b>811 44 - M</b>              |                                |                                |                                | 4 500  | <b>K811 44 - M</b>             | 1 320  | <b>GS811 44</b>  | <b>WS811 44</b>                                   | 1 590                         |
|   |                                | <b>812 44 - M</b>              |                                |                                | 12 850   | <b>K812 44 - M</b>             | 3 350  | <b>GS812 44</b>  | <b>WS812 44</b>                                   | 4 750                         |
|   |                                |                                |                                | <b>894 44 - M</b>              | 82 000   | <b>K894 44 - M</b>             | 17 600   | <b>GS894 44</b>  | <b>WS894 44</b>                                   | 32 200                        |
| <b>240</b>  | <b>811 48 - M</b>              |                                |                                |                                | 7 250  | <b>K811 48 - M</b>             | 2 110  | <b>GS811 48</b>  | <b>WS811 48</b>                                   | 2 570                         |
|   |                                | <b>812 48 - M</b>              |                                |                                | 21 950   | <b>K812 48 - M</b>             | 5 650  | <b>GS812 48</b>  | <b>WS812 48</b>                                   | 8 150                         |
|   |                                |                                |                                | <b>894 48 - M</b>              | 87 800   | <b>K894 48 - M</b>             | 19 200   | <b>GS894 48</b>  | <b>WS894 48</b>                                   | 34 300                        |
| <b>260</b>  | <b>811 52 - M</b>              |                                |                                |                                | 7 830  | <b>K811 52 - M</b>             | 2 300  | <b>GS811 52</b>  | <b>WS811 52</b>                                   | 2 765                         |
|   |                                | <b>812 52 - M</b>              |                                |                                | 23 900   | <b>K812 52 - M</b>             | 6 100  | <b>GS812 52</b>  | <b>WS812 52</b>                                   | 8 900                         |
|   |                                |                                |                                | <b>894 52 - M</b>              | 114 000  | <b>K894 52 - M</b>             | 25 500   | <b>GS894 52</b>  | <b>WS894 52</b>                                   | 44 250                        |
| <b>280</b>  | <b>811 56 - M</b>              |                                |                                |                                | 10 300   | <b>K811 56 - M</b>             | 3 000  | <b>GS811 56</b>  | <b>WS811 56</b>                                   | 3 650                         |
|   |                                | <b>812 56 - M</b>              |                                |                                | 25 900   | <b>K812 56 - M</b>             | 6 400  | <b>GS812 56</b>  | <b>WS812 56</b>                                   | 9 750                         |
|   |                                |                                |                                | <b>894 56 - M</b>              | 142 000  | <b>K894 56 - M</b>             | 30 800   | <b>GS894 56</b>  | <b>WS894 56</b>                                   | 55 600                        |
| <b>300</b>  | <b>811 60 - M</b>              |                                |                                |                                | 16 670   | <b>K811 60 - M</b>             | 4 830  | <b>GS811 60</b>  | <b>WS811 60</b>                                   | 5 920                         |
|   |                                | <b>812 60 - M</b>              |                                |                                | 40 550   | <b>K812 60 - M</b>             | 10 150   | <b>GS812 60</b>  | <b>WS812 60</b>                                   | 15 200                        |
|   |                                |                                |                                | <b>894 60 - M</b>              | 153 000  | <b>K894 60 - M</b>             | 32 700   | <b>GS894 60</b>  | <b>WS894 60</b>                                   | 80 150                        |
| <b>320</b>  | <b>811 64 - M</b>              |                                |                                |                                | 17 820   | <b>K811 64 - M</b>             | 5 120  | <b>GS811 64</b>  | <b>WS811 64</b>                                   | 6 350                         |
|   |                                |                                |                                | <b>894 64 - M</b>              | 42 600   | <b>K894 64 - M</b>             | 10 700   | <b>GS894 64</b>  | <b>WS894 64</b>                                   | 15 950                        |
|   |                                |                                |                                |                                |  |                                |  |  |   |                               |
| <b>340</b>  | <b>811 68<sup>▲</sup></b>      |                                |                                |                                | 19 450   | <b>K811 68<sup>▲</sup> - M</b> | 5 510  | <b>GS811 68<sup>▲</sup></b>                                | <b>WS811 68<sup>▲</sup></b>                       | 6 970                         |
|   |                                | <b>812 68<sup>▲</sup></b>      |                                |                                | 46 750   | <b>K812 68<sup>▲</sup> - M</b> | 11 250   | <b>GS812 68<sup>▲</sup></b>                                | <b>WS812 68<sup>▲</sup></b>                       | 17 750                        |
| <b>360</b>  | <b>811 72<sup>▲</sup></b>      |                                |                                |                                | 19 500   | <b>K811 72<sup>▲</sup> - M</b> | 5 550  | <b>GS811 72<sup>▲</sup></b>                                | <b>WS811 72<sup>▲</sup></b>                       | 6 975                         |
|   |                                | <b>812 72<sup>▲</sup></b>      |                                |                                | 65 650   | <b>K812 72<sup>▲</sup> - M</b> | 17 250   | <b>GS812 72<sup>▲</sup></b>                                | <b>WS812 72<sup>▲</sup></b>                       | 24 200                        |

▲ = Disponibile su richiesta / Available under request



| Dimensioni (mm)<br>Dimensions (mm) |       |            |       |     |       |      | Coefficienti di carico (N)<br>Basic load ratings (N) |                               | Velocità limite<br>Limiting Speed   |
|------------------------------------|-------|------------|-------|-----|-------|------|--|-------------------------------|-------------------------------------|
| $D_{c1}$<br>d                      | $D_1$ | D<br>$D_c$ | $d_1$ | T   | $D_w$ | B    | Dinamico C<br>Dynamic C                              | Statico $C_0$<br>Static $C_0$ | Olio (N. giri max)<br>Oil (max rpm) |
| 180                                | 183   | 225        | 222   | 34  | 14    | 10   | 339 600  | 1 299 700                     | 1 300                               |
| 180                                | 183   | 250        | 247   | 56  | 22    | 17   | 689 780  | 2 439 500                     | 1 200                               |
| 180                                | 184   | 360        | 360   | 109 | 36    | 36.5 | 2 200 400  | 8 199 300                     | 1 000                               |
| 190                                | 193   | 240        | 237   | 37  | 15    | 11   | 384 700  | 1 498 900                     | 1 200                               |
| 190                                | 194   | 270        | 267   | 62  | 26    | 18   | 879 300  | 2 998 900                     | 1 200                               |
| 190                                | 195   | 380        | 380   | 115 | 38    | 38.5 | 2 449 400  | 9 198 300                     | 950                                 |
| 200                                | 203   | 250        | 247   | 37  | 15    | 11   | 394 650  | 1 549 300                     | 1 200                               |
| 200                                | 204   | 280        | 277   | 62  | 26    | 18   | 899 700  | 3 149 150                     | 1 100                               |
| 200                                | 205   | 400        | 400   | 122 | 40    | 41   | 2 699 100  | 10 198 500                    | 900                                 |
| 220                                | 223   | 270        | 267   | 37  | 15    | 11   | 419 780  | 1 729 635                     | 1 100                               |
| 220                                | 224   | 300        | 297   | 63  | 26    | 18.5 | 939 960  | 3 449 750                     | 1 000                               |
| 220                                | 225   | 420        | 420   | 122 | 40    | 41   | 2 899 100  | 11 499 890                    | 850                                 |
| 240                                | 243   | 300        | 297   | 45  | 18    | 13.5 | 599 850  | 2 498 800                     | 1 000                               |
| 240                                | 244   | 340        | 335   | 78  | 32    | 23   | 1 369 600  | 4 999 100                     | 950                                 |
| 240                                | 245   | 440        | 440   | 122 | 40    | 41   | 2 995 900  | 12 189 900                    | 800                                 |
| 260                                | 263   | 320        | 317   | 45  | 18    | 13.5 | 619 400  | 2 649 700                     | 950                                 |
| 260                                | 264   | 360        | 355   | 79  | 32    | 23.5 | 1 439 500  | 5 398 900                     | 900                                 |
| 260                                | 265   | 480        | 480   | 132 | 44    | 44   | 3 548 860  | 14 599 850                    | 750                                 |
| 280                                | 283   | 350        | 347   | 53  | 22    | 15.5 | 859 000  | 3 649 750                     | 850                                 |
| 280                                | 284   | 380        | 375   | 80  | 32    | 24   | 1 450 000  | 5 595 000                     | 800                                 |
| 280                                | 285   | 520        | 520   | 145 | 48    | 48.5 | 4 190 600  | 17 399 000                    | 650                                 |
| 300                                | 304   | 380        | 376   | 62  | 25    | 18.5 | 1 050 000  | 4 495 000                     | 800                                 |
| 300                                | 304   | 420        | 415   | 95  | 38    | 28.5 | 1 920 000  | 7 298 500                     | 750                                 |
| 300                                | 305   | 540        | 540   | 145 | 48    | 48.5 | 4 298 950  | 18 300 000                    | 650                                 |
| 320                                | 324   | 400        | 396   | 63  | 25    | 19   | 1 050 500  | 4 7000 000                    | 750                                 |
| 320                                | 325   | 580        | 575   | 155 | 68    | 43.5 | 1 959 600  | 7 592 900                     | 700                                 |
| 340                                | 344   | 420        | 416   | 64  | 25    | 19.5 | 1 128 500  | 4 998 600                     | 700                                 |
| 340                                | 345   | 460        | 455   | 96  | 38    | 29   | 2 058 900  | 8 299 000                     | 650                                 |
| 360                                | 364   | 440        | 436   | 65  | 25    | 20   | 1 139 500  | 5 099 900                     | 650                                 |
| 360                                | 365   | 500        | 495   | 110 | 45    | 32.5 | 2 690 600  | 10 595 000                    | 600                                 |



| Diametro albero (mm)<br>Shaft diameter (mm) | Sigla<br>Designation | Peso (g)<br>Weight (g) | Ralla assiale<br>Axial Bearing Washer | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |      |    |                | Coefficienti di carico (N)<br>Basic load ratings (N) |   | Velocità limite<br>Limiting Speed<br>Olio (N. giri max)<br>Oil (max rpm) |
|---|----------------------|------------------------|---------------------------------------|------------------------|------------------------------------|------|----|----------------|--|---|--|
|   |                      |                        |                                       |                        | Dc1/d                              | Dc/D | Dw | B <sub>1</sub> | Dinamico C<br>Dynamic C                              | Statico C <sub>0</sub><br>Static C <sub>0</sub> |  |
| 4   | AXK 0414 TN          | 0.7                    | AS 0414                               | 1                      | 4                                  | 14   | 2  | 1              | 4 380  | 7 500   | 20 000   |
| 5   | AXK 0515 TN          | 0.8                    | AS 0515                               | 1                      | 5                                  | 15   | 2  | 1              | 4 680  | 9 100   | 20 000   |
| 6   | AXK 0619 TN          | 1                      | AS 0619                               | 2                      | 6                                  | 19   | 2  | 1              | 6 740  | 15 400  | 18 000   |
| 8   | AXK 0821 TN          | 2                      | AS 0821                               | 2                      | 8                                  | 21   | 2  | 1              | 7 750  | 19 000  | 17 000   |
| 10  | AXK 1024             | 3                      | AS 1024                               | 3                      | 10                                 | 24   | 2  | 1              | 9 150  | 24 500  | 16 000   |
| 12  | AXK 1226             | 3                      | AS 1226                               | 3                      | 12                                 | 26   | 2  | 1              | 9 860  | 28 600  | 14 250   |
| 15  | AXK 1528             | 4                      | AS 1528                               | 3                      | 15                                 | 28   | 2  | 1              | 11 200   | 35 500  | 12 350   |
| 17  | AXK 1730             | 4                      | AS 1730                               | 4                      | 17                                 | 30   | 2  | 1              | 11 800   | 38 600  | 11 400   |
| 20  | AXK 2035             | 5                      | AS 2035                               | 5                      | 20                                 | 35   | 2  | 1              | 12 900   | 45 600  | 9 500  |
| 25  | AXK 2542             | 7                      | AS 2542                               | 7                      | 25                                 | 42   | 2  | 1              | 13 800   | 57 800  | 8 000  |
| 30  | AXK 3047             | 8                      | AS 3047                               | 8                      | 30                                 | 47   | 2  | 1              | 15 600   | 69 500  | 6 500  |
| 35  | AXK 3552             | 10                     | AS 3552                               | 9                      | 35                                 | 52   | 2  | 1              | 16 900   | 80 100  | 6 100  |
| 40  | AXK 4060             | 16                     | AS 4060                               | 12                     | 40                                 | 60   | 3  | 1              | 27 500   | 113 500   | 5 700  |
| 45  | AXK 4565             | 18                     | AS 4565                               | 13                     | 45                                 | 65   | 3  | 1              | 29 050   | 127 600   | 4 750  |
| 50  | AXK 5070             | 20                     | AS 5070                               | 14                     | 50                                 | 70   | 3  | 1              | 31 500   | 138 500   | 4 500  |
| 55  | AXK 5578             | 28                     | AS 5578                               | 18                     | 55                                 | 78   | 3  | 1              | 37 400   | 185 000   | 4 100  |
| 60  | AXK 6085             | 33                     | AS 6085                               | 22                     | 60                                 | 85   | 3  | 1              | 43 900   | 232 500   | 3 800  |
| 65  | AXK 6590             | 35                     | AS 6590                               | 24                     | 65                                 | 90   | 3  | 1              | 45 800   | 254 600   | 3 500  |
| 70  | AXK 7095             | 60                     | AS 7095                               | 25                     | 70                                 | 95   | 4  | 1              | 53 600   | 254 600   | 3 300  |
| 75  | AXK 75100            | 61                     | AS 75100                              | 27                     | 75                                 | 100  | 4  | 1              | 54 500   | 264 500   | 3 100  |
| 80  | AXK 80105            | 63                     | AS 80105                              | 28                     | 80                                 | 105  | 4  | 1              | 55 600   | 278 500   | 2 900  |
| 85  | AXK 85110            | 67                     | AS 85110                              | 29                     | 85                                 | 110  | 4  | 1              | 57 500   | 275 000   | 2 850  |
| 90  | AXK 90120            | 86                     | AS 90120                              | 39                     | 90                                 | 120  | 4  | 1              | 72 500   | 401 000   | 2 500  |
| 100   | AXK 100135           | 104                    | AS 100135                             | 50                     | 100                                | 135  | 4  | 1              | 90 500   | 559 500   | 2 400  |
| 110   | AXK 110145           | 122                    | AS 110145                             | 55                     | 110                                | 145  | 4  | 1              | 96 500   | 617 500   | 2 200  |
| 120   | AXK 120155           | 131                    | AS 120155                             | 59                     | 120                                | 155  | 4  | 1              | 101 500  | 679 000   | 2 000  |
| 130   | AXK 130170           | 205                    | AS 130170                             | 65                     | 130                                | 170  | 5  | 1              | 132 400  | 838 900   | 1 800  |
| 140   | AXK 140180           | 219                    | AS 140180                             | 79                     | 140                                | 180  | 5  | 1              | 137 200  | 899 000   | 1 700  |
| 150   | AXK 150190           | 232                    | AS 150190                             | 84                     | 150                                | 190  | 5  | 1              | 142 800  | 959 000   | 1 600  |
| 160   | AXK 160200           | 246                    | AS 160200                             | 89                     | 160                                | 200  | 5  | 1              | 147 600  | 1 015 000                                       | 1 500  |

TN= Gabbia in materiale plastico, temperatura di funzionamento ammessa: 80°C (continuativi).  
TN= Plastic cage; temperature allowed: 80°C. (continuous working).

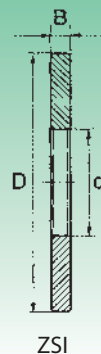
Lubrificazione con grasso: 25% in meno dei valori indicati in tabella.  
Grease lubrication: less 25% of value indicated in tables.



AXW

| Diametro albero (mm)<br>Shaft diameter (mm) | Sigla<br>Designation | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |                |    |     |                | Coefficienti di carico (N)<br>Basic load ratings (N) |   | Velocità limite<br>Limiting Speed<br>Olio (N. giri max)<br>Oil (max rpm) |
|---|----------------------|------------------------|------------------------------------|----------------|----|-----|----------------|--|---|--|
|   |                      |                        | D <sub>c1</sub>                    | D <sub>1</sub> | D  | B   | B <sub>1</sub> | Dinamico C<br>Dynamic C                              | Statico C <sub>0</sub><br>Static C <sub>0</sub> |  |
| <b>10</b>                                   | <b>AXW 10</b>        | 8.3                    | 10                                 | 14             | 27 | 3.2 | 3              | 9 100  | 24 000  | 15 200   |
| <b>12</b>                                   | <b>AXW 12</b>        | 9.1                    | 12                                 | 16             | 29 | 3.2 | 3              | 9 400  | 27 800  | 13 300   |
| <b>15</b>                                   | <b>AXW 15</b>        | 10.1                   | 15                                 | 21             | 31 | 3.2 | 3.5            | 10 500   | 35 000  | 12 350   |
| <b>17</b>                                   | <b>AXW 17</b>        | 11                     | 17                                 | 23             | 33 | 3.2 | 3.5            | 11 300   | 38 800  | 11 400   |
| <b>20</b>                                   | <b>AXW 20</b>        | 14                     | 20                                 | 26             | 38 | 3.2 | 3.5            | 12 700   | 45 600  | 10 000   |
| <b>25</b>                                   | <b>AXW 25</b>        | 19.5                   | 25                                 | 32             | 45 | 3.2 | 4              | 13 900   | 57 500  | 7 600  |
| <b>30</b>                                   | <b>AXW 30</b>        | 22                     | 30                                 | 37             | 50 | 3.2 | 4              | 15 900   | 69 500  | 6 650  |
| <b>35</b>                                   | <b>AXW 35</b>        | 26.6                   | 35                                 | 42             | 55 | 3.2 | 4              | 17 000   | 80 100  | 6 200  |
| <b>40</b>                                   | <b>AXW 40</b>        | 39.2                   | 40                                 | 47             | 63 | 4.2 | 4              | 27 800   | 109 000   | 5 200  |
| <b>45</b>                                   | <b>AXW 45</b>        | 43.4                   | 45                                 | 52             | 68 | 4.2 | 4              | 29 500   | 121 600   | 4 750  |
| <b>50</b>                                   | <b>AXW 50</b>        | 49.2                   | 50                                 | 58             | 73 | 4.2 | 4.5            | 31 800   | 140 900   | 4 500  |

Lubrificazione con grasso: 25% in meno dei valori indicati in tabella.  
Grease lubrication: less 25% of value indicated in tables.



| Diametro albero (mm)<br>Shaft Diameter (mm) | Sigla<br>Designation | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |     |      | Gabbie assiali a rullini<br>Axial needle roller | Gabbie assiali a rulli cilindrici<br>Axial cylindrical roller | Ralle per alloggiamento<br>Housing locating Washers |
|---|----------------------|------------------------|------------------------------------|-----|------|---|---|---|
|   |                      |                        | d                                  | D   | B    |   |   |   |
| 15  | ZSI 1127             | 21                     | 11                                 | 27  | 5.5  | AXK 1528  | K 811 02 TN   | GS 811 02   |
| 17  | ZSI 1329             | 23                     | 13                                 | 29  | 5.5  | AXK 1730  | K 811 03 TN   | GS 811 03   |
| 20  | ZSI 1634             | 31                     | 16                                 | 34  | 5.5  | AXK 2035  | K 811 04 TN   | GS 811 04   |
| 25  | ZSI 2141             | 45                     | 21                                 | 41  | 6    | AXK 2542  | K 811 05 TN   | GS 811 05   |
| 30  | ZSI 2646             | 60                     | 26                                 | 46  | 7    | AXK 3047  | K 811 06 TN   | GS 811 06   |
| 35  | ZSI 3151             | 78                     | 31                                 | 51  | 8    | AXK 3552  | K 811 07 TN   | GS 811 07   |
| 40  | ZSI 3159             | 125                    | 31                                 | 59  | 8    | AXK 4060  | K 811 08 TN   | GS 811 08   |
| 45  | ZSI 3664             | 156                    | 36                                 | 64  | 9    | AXK 4565  | K 811 09 TN   | GS 811 09   |
| 50  | ZSI 4169             | 191                    | 41                                 | 69  | 10   | AXK 5070  | K 811 10 TN   | GS 811 10   |
| 55  | ZSI 4677             | 235                    | 46                                 | 77  | 10   | AXK 5578  | K 811 11 TN   | GS 811 11   |
| 60  | ZSI 5184             | 316                    | 51                                 | 84  | 11.5 | AXK 6085  | K 811 12 TN   | GS 811 12   |
| 65  | ZSI 5689             | 360                    | 56                                 | 89  | 12   | AXK 6590  | K 811 13 TN   | GS 811 13   |
| 70  | ZSI 5694             | 440                    | 56                                 | 94  | 12.5 | AXK 7095  | K 811 14 TN   | GS 811 14   |
| 75  | ZSI 6199             | 470                    | 61                                 | 99  | 12.5 | AXK 75100                                       | K 811 15 TN   | GS 811 15   |
| 80  | ZSI 66104            | 500                    | 66                                 | 104 | 12.5 | AXK 80105                                       | K 811 16 TN   | GS 811 16   |
| 85  | ZSI 71109            | 593                    | 71                                 | 109 | 14.5 | AXK 85110                                       | K 811 17 TN   | GS 811 17   |
| 90  | ZSI 76119            | 806                    | 76                                 | 119 | 16   | AXK 90120                                       | K 811 18 TN   | GS 811 18   |
| 100   | ZSI 86134            | 1 180                  | 86                                 | 134 | 18   | AXK 100135                                      | K 811 20 TN   | GS 811 20   |
| 110   | ZSI 96144            | 1 430                  | 96                                 | 144 | 20   | AXK 110145                                      | K 811 22 TN   | GS 811 22   |
| 120   | ZSI 101154           | 1 830                  | 101                                | 154 | 22   | AXK 120155                                      | K 811 24  | GS 811 24   |
| 130   | ZSI 111169           | 2 210                  | 111                                | 169 | 22   | AXK 130170                                      | K 811 26  | GS 811 26   |
| 140   | ZSI 121179           | 2 460                  | 121                                | 179 | 23   | AXK 140180                                      | K 811 28  | GS 811 28   |
| 150   | ZSI 131189           | 2 740                  | 131                                | 189 | 24   | AXK 150190                                      | K 811 30  | GS 811 30   |
| 160   | ZSI 141199           | 3 030                  | 141                                | 199 | 25   | AXK 160200                                      | K 811 32  | GS 811 32   |

**Ralle intermedie con centraggio esterno (serie ZSE)**  
**Intermediate washers with outer centering (ZSE series)**



| Diametro albero (mm)<br>Shaft Diameter (mm) | Ralle intermedie<br>Designation of Center Washers | Peso (g)<br>Weight (g) | Dimensioni (mm)<br>Dimensions (mm) |     |      | Gabbie assiali a rullini<br>Axial needle roller | Gabbie assiali a rulli cilindrici<br>Axial cylindrical roller | Ralle per albero<br>Shaft locating washers |
|---|---|------------------------|------------------------------------|-----|------|---|---|--|
|   |   |                        | d                                  | D   | B    |   |   |  |
| 15  | ZSE 1634  | 31                     | 16                                 | 34  | 5,5  | AXK 1528  | K 811 02 TN   | WS 811 02                                  |
| 20  | ZSE 2141  | 45                     | 21                                 | 41  | 6    | AXK 2035  | K 811 04 TN   | WS 811 04                                  |
| 25  | ZSE 2646  | 60                     | 26                                 | 46  | 7    | AXK 2542  | K 811 05 TN   | WS 811 05                                  |
| 30  | ZSE 3151  | 78                     | 31                                 | 51  | 8    | AXK 3047  | K 811 06 TN   | WS 811 06                                  |
| 35  | ZSE 3664  | 156                    | 36                                 | 64  | 9    | AXK 3552  | K 811 07 TN   | WS 811 07                                  |
| 40  | ZSE 4169  | 191                    | 41                                 | 69  | 10   | AXK 4060  | K 811 08 TN   | WS 811 08                                  |
| 45  | ZSE 4677  | 235                    | 46                                 | 77  | 10   | AXK 4565  | K 811 09 TN   | WS 811 09                                  |
| 50  | ZSE 5184  | 316                    | 51                                 | 84  | 11,5 | AXK 5070  | K 811 10 TN   | WS 811 10                                  |
| 55  | ZSE 5689  | 360                    | 56                                 | 89  | 12   | AXK 5578  | K 811 11 TN   | WS 811 11                                  |
| 60  | ZSE 6199  | 470                    | 61                                 | 99  | 12,5 | AXK 6085  | K 811 12 TN   | WS 811 12                                  |
| 65  | ZSE 66104   | 500                    | 66                                 | 104 | 12,5 | AXK 6590  | K 811 13 TN   | WS 811 13                                  |
| 70  | ZSE 71109   | 593                    | 71                                 | 109 | 14,5 | AXK 7095  | K 811 14 TN   | WS 811 14                                  |
| 75  | ZSE 76119   | 806                    | 76                                 | 119 | 16   | AXK 75100                                       | K 811 15 TN   | WS 811 15                                  |
| 85  | ZSE 86134   | 1 180                  | 86                                 | 134 | 18   | AXK 85110                                       | K 811 17 TN   | WS 811 17                                  |
| 100   | ZSE 101154  | 1 830                  | 101                                | 154 | 22   | AXK 100135                                      | K 811 20 TN   | WS 811 20                                  |
| 110   | ZSE 111169  | 2 210                  | 111                                | 169 | 22   | AXK 110145                                      | K 811 22 TN   | WS 811 22                                  |
| 120   | ZSE 121179  | 2 460                  | 121                                | 179 | 23   | AXK 120155                                      | K 811 24  | WS 811 24                                  |
| 130   | ZSE 131189  | 2 740                  | 131                                | 189 | 24   | AXK 130170                                      | K 811 26  | WS 811 26                                  |
| 140   | ZSE 141199  | 3 030                  | 141                                | 199 | 25   | AXK 140180                                      | K 811 28  | WS 811 28                                  |
| 150   | ZSE 151214  | 3 830                  | 151                                | 214 | 27   | AXK 150190                                      | K 811 30  | WS 811 30                                  |
| 160   | ZSE 161224  | 4 350                  | 161                                | 224 | 29   | AXK 160200                                      | K 811 32  | WS 811 32                                  |