

PL series Planetary Roller Screw



PL series Planetary Roller Screw is mainly composed of the main screw, nut and rollers. The main screw is multiple thread. The adjacent sides of the threads are in 90°. The teeth shape is triangular. The nut is internally threaded with the same teeth shape as the main screw; the roller is single thread and the teeth are in circular arc.

The side of roller is in convex tooth shape and the two ends are both made into small gears and cylindrical smooth shafts which are provided and fixed in the hole of retaining collar at the end side to maintain the equal distance between rollers. The retaining collar at the end side is provided flexibly within the nut and is fixed axially by elasticity. The small gears at the two ends of roller are engaged with the fixed gear rings within the nut to ensure axial parallelism between rollers so as to achieve the optimal performance.

Planetary Roller Screws-PL Series(Standard)

| | Model | | mm | PL | | | | | | | | | | | | | | | | |
|----------------------------|-----------------------------|-----|--------|------|------|------|------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|--|
| | | | | 12 | | | | 15 | | | | 18 | | | | 21 | | | | |
| Lead | P | mm | | 1 | 2 | 3 | 4 | 2 | 3 | 4 | 5 | 3 | 4 | 5 | 6 | 3 | 4 | 5 | 6 | |
| Number of starts of thread | N | | | 4 | 5 | | | | 5 | | | | 5 | | | | 5 | | | |
| Lead angle | | ° | | 1.52 | 3.04 | 4.55 | 6.06 | 2.43 | 3.64 | 4.85 | 6.06 | 3.04 | 4.05 | 5.05 | 6.06 | 2.6 | 3.47 | 4.33 | 5.2 | |
| Single nut | Rated dynamic load | Ca | kN | 13.3 | 14.2 | 15.5 | 17.1 | 24.4 | 25.2 | 26.4 | 28.2 | 35.1 | 37.5 | 36.6 | 38.4 | 52.8 | 56.4 | 59.2 | 62.1 | |
| | Rated dead load | Coa | kN | 24.8 | 26.5 | 25.7 | 27.2 | 54.9 | 50.5 | 49.2 | 51.2 | 75.8 | 76.1 | 67.9 | 69.5 | 105 | 105.2 | 104.5 | 105.8 | |
| | Stiffness coefficient | Fk | N2/3um | 56.4 | 47.6 | 37.9 | 33.3 | 66.7 | 50.9 | 43.3 | 39.4 | 61.8 | 53.2 | 44 | 40.6 | 70.9 | 61.3 | 54.2 | 49.6 | |
| | Axial clearance | * | mm | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.04 | 0.02 | 0.02 | 0.03 | 0.04 | 0.02 | 0.02 | 0.03 | 0.03 | |
| Double nut | Rated dynamic load | Ca | kN | 13.3 | 14.2 | 15.5 | 17.1 | 24.4 | 25.2 | 26.4 | 28.2 | 35.1 | 37.5 | 36.6 | 38.4 | 52.8 | 56.4 | 59.2 | 62.1 | |
| | Rated dead load | Coa | kN | 24.8 | 26.5 | 25.7 | 27.2 | 54.9 | 50.5 | 49.2 | 51.2 | 75.8 | 76.1 | 67.9 | 69.5 | 105 | 105.2 | 104.5 | 105.8 | |
| | Stiffness coefficient | Fk | N2/3um | 84.6 | 71.3 | 56.8 | 50 | 100.1 | 76.3 | 64.9 | 59.1 | 92.7 | 79.8 | 66 | 61 | 106.4 | 91.9 | 81.3 | 74.4 | |
| | Pretightening force | Fv | N | 653 | 558 | 465 | 372 | 597 | 520 | 446 | 374 | 702 | 625 | 544 | 470 | 1062 | 963 | 866 | 771 | |
| | Pretension torsional moment | Mv | Nm | 0.08 | 0.08 | 0.08 | 0.08 | 0.1 | 0.1 | 0.1 | 0.1 | 0.15 | 0.15 | 0.15 | 0.15 | 0.25 | 0.25 | 0.25 | 0.25 | |
| Preload nut | Rated dynamic load | Ca | kN | 7.4 | 7.9 | 8.6 | 9.4 | 13.5 | 13.9 | 14.7 | 15.8 | 19.2 | 20.5 | 20 | 21.2 | 29 | 31.1 | 32.6 | 34.3 | |
| | Rated dead load | Coa | kN | 12.4 | 13.3 | 12.9 | 13.5 | 27.6 | 25.2 | 24.6 | 25.6 | 37.9 | 38 | 33.9 | 34.8 | 52.5 | 52.7 | 52.3 | 52.9 | |
| | Stiffness coefficient | Fk | N2/3um | 35.4 | 29.9 | 23.7 | 20.9 | 41.9 | 31.9 | 27.2 | 24.7 | 38.8 | 33.4 | 27.6 | 25.5 | 44.6 | 38.5 | 34.1 | 31.1 | |
| | Pretightening force | Fv | N | 653 | 558 | 465 | 372 | 597 | 520 | 446 | 374 | 702 | 625 | 544 | 470 | 1062 | 963 | 866 | 771 | |
| | Pretension torsional moment | Mv | Nm | 0.08 | 0.08 | 0.08 | 0.08 | 0.1 | 0.1 | 0.1 | 0.1 | 0.15 | 0.15 | 0.15 | 0.15 | 0.25 | 0.25 | 0.25 | 0.25 | |
| Forward efficiency | | | | 0.77 | 0.85 | 0.87 | 0.88 | 0.83 | 0.86 | 0.87 | 0.88 | 0.85 | 0.87 | 0.88 | 0.88 | 0.83 | 0.86 | 0.87 | 0.88 | |
| Inversion efficiency | | | | 0.7 | 0.82 | 0.86 | 0.87 | 0.79 | 0.84 | 0.86 | 0.87 | 0.82 | 0.85 | 0.86 | 0.87 | 0.8 | 0.84 | 0.85 | 0.86 | |



Planetary Roller Screws-PL Series(Standard)

| Model | D | mm | PL | | | | | | | | | | | | | | | | | | |
|----------------------------|-----------------------------|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 25 | | | | 27 | | | | 30 | | | | 36 | | | | | | |
| Nominal diameter | D | mm | 25 | | | | 27 | | | | 30 | | | | 36 | | | | | | |
| Lead | P | mm | 4 | 5 | 6 | 8 | 4 | 5 | 6 | 8 | 4 | 5 | 6 | 8 | 10 | 4 | 5 | 6 | 8 | 10 | |
| Number of starts of thread | N | | 5 | | | | 5 | | | | 5 | | | | 5 | | | | | | |
| Lead angle | | ° | 2.92 | 3.64 | 4.37 | 5.82 | 2.7 | 3.37 | 4.05 | 5.39 | 2.43 | 3.04 | 3.64 | 4.85 | 6.06 | 2.03 | 2.53 | 3.04 | 4.05 | 5.05 | |
| Single nut | Rated dynamic load | Ca | kN | 76.9 | 81.2 | 84.1 | 90.7 | 85 | 90.1 | 93.7 | 98.6 | 100.7 | 107.1 | 111 | 117.1 | 126.2 | 128 | 135.1 | 140.3 | 149.3 | 159.5 |
| | Rated dead load | Coa | kN | 161.1 | 161.4 | 159.5 | 162.3 | 178.1 | 179.6 | 178.8 | 174.6 | 221.5 | 224.6 | 222.3 | 217.6 | 226.4 | 296.8 | 297.3 | 294.5 | 292.2 | 299.5 |
| | Stiffness coefficient | Fk | N2/3um | 74 | 65.9 | 59.5 | 51.8 | 76.5 | 68.5 | 62 | 52.7 | 83.9 | 75.4 | 68.2 | 58 | 52.8 | 95.3 | 84.4 | 76.6 | 65.5 | 59 |
| | Axial clearance | * | mm | 0.02 | 0.03 | 0.03 | 0.04 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 |
| Double nut | Rated dynamic load | Ca | kN | 76.9 | 81.2 | 84.1 | 90.7 | 85 | 90.1 | 93.7 | 98.6 | 100.7 | 107.1 | 111 | 117.1 | 126.2 | 128 | 135.1 | 140.3 | 149.3 | 159.5 |
| | Rated dead load | Coa | kN | 161.1 | 161.4 | 159.5 | 162.3 | 178.1 | 179.6 | 178.8 | 174.6 | 221.5 | 224.6 | 222.3 | 217.6 | 226.4 | 296.8 | 297.3 | 294.5 | 292.2 | 299.5 |
| | Stiffness coefficient | Fk | N2/3um | 111.1 | 98.9 | 89.3 | 77.7 | 114.8 | 102.8 | 93 | 79.1 | 126 | 113.2 | 102.3 | 87 | 79.2 | 143 | 126.6 | 115 | 98.4 | 88.6 |
| | Pretightening force | Fv | N | 1245 | 1140 | 1035 | 840 | 1312 | 1218 | 1123 | 940 | 1520 | 1426 | 1330 | 1140 | 963 | 1714 | 1631 | 1546 | 1373 | 1205 |
| | Pretension torsional moment | Mv | Nm | 0.35 | 0.35 | 0.35 | 0.35 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Preload nut | Rated dynamic load | Ca | kN | 42.3 | 44.7 | 46.3 | 49.9 | 46.8 | 49.6 | 51.6 | 54.3 | 55.4 | 58.9 | 61.1 | 64.5 | 69.5 | 70.5 | 74.4 | 77.2 | 82.2 | 87.9 |
| | Rated dead load | Coa | kN | 80.5 | 80.7 | 79.7 | 81.1 | 89 | 89.8 | 89.3 | 87.2 | 110.7 | 112.2 | 111.1 | 108.8 | 113.2 | 148.3 | 148.6 | 147.2 | 146.1 | 149.7 |
| | Stiffness coefficient | Fk | N2/3um | 46.7 | 41.6 | 37.5 | 32.7 | 48.3 | 43.2 | 39.1 | 33.3 | 52.9 | 47.6 | 43 | 36.6 | 33.3 | 60.1 | 53.2 | 48.3 | 41.3 | 37.2 |
| | Pretightening force | Fv | N | 1245 | 1140 | 1035 | 840 | 1312 | 1218 | 1123 | 940 | 1520 | 1426 | 1330 | 1140 | 963 | 1714 | 1631 | 1546 | 1373 | 1205 |
| | Pretension torsional moment | Mv | Nm | 0.35 | 0.35 | 0.35 | 0.35 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Forward efficiency | | | 0.85 | 0.86 | 0.87 | 0.88 | 0.84 | 0.85 | 0.87 | 0.88 | 0.83 | 0.85 | 0.86 | 0.87 | 0.88 | 0.81 | 0.83 | 0.85 | 0.87 | 0.88 | |
| Inversion efficiency | | | 0.82 | 0.84 | 0.86 | 0.87 | 0.81 | 0.83 | 0.85 | 0.86 | 0.79 | 0.82 | 0.84 | 0.86 | 0.87 | 0.76 | 0.8 | 0.82 | 0.85 | 0.86 | |

Planetary Roller Screws-PL Series(Standard)

| Model | D | mm | PL | | | | | | | | | | | | | | | | |
|----------------------------|-----------------------------|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 39 | | | | | 44 | | 48 | | | 51 | | | 56 | | | |
| Nominal diameter | D | mm | 39 | | | | | 44 | | 48 | | | 51 | | | 56 | | | |
| Lead | P | mm | 4 | 5 | 6 | 8 | 10 | 6 | 12 | 5 | 10 | 15 | 5 | 10 | 15 | 6 | 12 | 18 | |
| Number of starts of thread | N | | 5 | | | | | 6 | | 5 | | | 5 | | | 6 | | | |
| Lead angle | | ° | 1.87 | 2.34 | 2.8 | 3.74 | 4.67 | 2.49 | 4.96 | 1.9 | 3.79 | 5.68 | 1.79 | 3.57 | 5.35 | 1.95 | 3.9 | 5.84 | |
| Single nut | Rated dynamic load | Ca | kN | 149.6 | 159.3 | 166 | 174.8 | 185.4 | 145.4 | 168.7 | 218.5 | 258.4 | 284.4 | 262.9 | 307.9 | 338.9 | 219.4 | 256 | 277.8 |
| | Rated dead load | Coa | kN | 366.1 | 371.9 | 370.6 | 361.1 | 365.6 | 341.4 | 334.5 | 556.1 | 559 | 562 | 725.8 | 717.2 | 720.3 | 584.8 | 575.8 | 566.8 |
| | Stiffness coefficient | Fk | N2/3um | 104.8 | 93.1 | 84.8 | 72 | 64.4 | 94.1 | 64.9 | 111.5 | 77.4 | 62.8 | 126.2 | 86.8 | 70.2 | 118.9 | 82.1 | 66.1 |
| | Axial clearance | * | mm | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
| Double nut | Rated dynamic load | Ca | kN | 149.6 | 159.3 | 166 | 174.8 | 185.4 | 145.4 | 168.7 | 218.5 | 258.4 | 284.4 | 262.9 | 307.9 | 338.9 | 219.4 | 256 | 277.8 |
| | Rated dead load | Coa | kN | 366.1 | 371.9 | 370.6 | 361.1 | 365.6 | 341.4 | 334.5 | 556.1 | 559 | 562 | 725.8 | 717.2 | 720.3 | 584.8 | 575.8 | 566.8 |
| | Stiffness coefficient | Fk | N2/3um | 157.3 | 139.7 | 127.2 | 108.1 | 96.7 | 141.2 | 97.4 | 167.3 | 116.1 | 94.2 | 189.3 | 130.2 | 105.4 | 178.4 | 123.3 | 99.3 |
| | Pretightening force | Fv | N | 1980 | 1892 | 1804 | 1623 | 1444 | 2069 | 1540 | 2410 | 1969 | 1535 | 2675 | 2221 | 1768 | 2743 | 2223 | 1717 |
| | Pretension torsional moment | Mv | Nm | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 1 | 1 | 1.2 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 | 1.6 | 1.6 | 1.6 |
| Preload nut | Rated dynamic load | Ca | kN | 82.4 | 87.7 | 91.4 | 96.3 | 102.1 | 80.1 | 92.9 | 120.3 | 142.3 | 156.6 | 144.8 | 169.6 | 186.7 | 120.8 | 141 | 153 |
| | Rated dead load | Coa | kN | 183 | 185.9 | 185.3 | 180.5 | 182.7 | 170.7 | 167.2 | 278 | 279.5 | 280.9 | 362.8 | 358.6 | 360.1 | 292.4 | 287.9 | 283.4 |
| | Stiffness coefficient | Fk | N2/3um | 66 | 58.6 | 53.4 | 45.3 | 40.5 | 59.2 | 40.8 | 70.2 | 48.7 | 39.5 | 79.5 | 54.6 | 44.2 | 74.9 | 51.7 | 41.6 |
| | Pretightening force | Fv | N | 1980 | 1892 | 1804 | 1623 | 1444 | 2069 | 1540 | 2410 | 1969 | 1535 | 2675 | 2221 | 1768 | 2743 | 2223 | 1717 |
| | Pretension torsional moment | Mv | Nm | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 1 | 1 | 1.2 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 | 1.6 | 1.6 | 1.6 |
| Forward efficiency | | | 0.8 | 0.82 | 0.84 | 0.86 | 0.87 | 0.83 | 0.88 | 0.8 | 0.86 | 0.88 | 0.79 | 0.86 | 0.88 | 0.8 | 0.86 | 0.88 | |
| Inversion efficiency | | | 0.75 | 0.79 | 0.81 | 0.84 | 0.86 | 0.8 | 0.86 | 0.75 | 0.84 | 0.87 | 0.74 | 0.84 | 0.86 | 0.76 | 0.85 | 0.87 | |



Planetary Roller Screws-PL Series(Standard)

| | Model | D | mm | PL | | | | | | | | | | | | | | | | | | | |
|----------------------------|-----------------------------|-----|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | | | | 60 | | | | 64 | | | | 75 | | | | 80 | | | | 87 | | | |
| Lead | P | mm | | 5 | 10 | 15 | 20 | 6 | 12 | 18 | 10 | 15 | 20 | 25 | 12 | 18 | 24 | 10 | 15 | 20 | 25 | 30 | |
| Number of starts of thread | N | | | 5 | | | | 6 | | | | 5 | | | | 6 | | | | 5 | | | |
| Lead angle | | ° | | 1.52 | 3.04 | 4.55 | 6.06 | 1.71 | 3.42 | 5.12 | 2.43 | 3.64 | 4.85 | 6.06 | 2.73 | 4.1 | 5.45 | 2.1 | 3.14 | 4.19 | 5.23 | 6.26 | |
| Single nut | Rated dynamic load | Ca | kN | 321.1 | 380 | 414.9 | 500.3 | 255.4 | 303 | 332.7 | 497.7 | 549.4 | 639.4 | 642.3 | 385.2 | 428.1 | 524.5 | 606.5 | 656.6 | 767.9 | 767.7 | 785 | |
| | Rated dead load | Coa | kN | 921.9 | 925.7 | 915.8 | 1057 | 802.1 | 791.7 | 781.3 | 1452.6 | 1440.3 | 1666 | 1651.6 | 1040.8 | 1045.7 | 1225.7 | 1857.2 | 1862.7 | 2179.4 | 2140.2 | 2191.8 | |
| | Stiffness coefficient | Fk | N2/3um | 139.4 | 96.4 | 77.4 | 68.3 | 137.2 | 94.4 | 75.9 | 116.6 | 94.2 | 82.6 | 73.6 | 105.2 | 85.3 | 75.6 | 129.7 | 105 | 92.4 | 81.8 | 75.5 | |
| | Axial clearance | * | mm | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | |
| Double nut | Rated dynamic load | Ca | kN | 321.1 | 380 | 414.9 | 500.3 | 255.4 | 303 | 332.7 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Rated dead load | Coa | kN | 921.9 | 925.7 | 915.8 | 1057 | 802.1 | 791.7 | 781.3 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Stiffness coefficient | Fk | N2/3um | 209.2 | 144.7 | 116.2 | 102.5 | 205.9 | 141.7 | 113.9 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Pretightening force | Fv | N | 2994 | 2581 | 2153 | 1749 | 3069 | 2578 | 2081 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Pretension torsional moment | Mv | Nm | 1.8 | 1.8 | 1.8 | 1.8 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | |
| Preload nut | Rated dynamic load | Ca | kN | 176.9 | 209.3 | 228.5 | 275.6 | 142.6 | 169.2 | 185.8 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Rated dead load | Coa | kN | 460.9 | 462.8 | 457.9 | 528.4 | 401 | 395.8 | 390.6 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Stiffness coefficient | Fk | N2/3um | 87.8 | 60.7 | 48.8 | 43 | 86.4 | 59.4 | 47.8 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Pretightening force | Fv | N | 2994 | 2581 | 2153 | 1749 | 3069 | 2578 | 2081 | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Pretension torsional moment | Mv | Nm | 1.8 | 1.8 | 1.8 | 1.8 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | |
| Forward efficiency | | | | 0.77 | 0.85 | 0.87 | 0.88 | 0.78 | 0.86 | 0.88 | 0.83 | 0.86 | 0.87 | 0.88 | 0.84 | 0.87 | 0.88 | 0.81 | 0.85 | 0.87 | 0.88 | 0.88 | |
| Inversion efficiency | | | | 0.7 | 0.82 | 0.86 | 0.87 | 0.73 | 0.83 | 0.86 | 0.79 | 0.84 | 0.86 | 0.87 | 0.81 | 0.85 | 0.86 | 0.77 | 0.83 | 0.85 | 0.86 | 0.87 | |

Planetary Roller Screws-PL Series(Standard)

| | Model | D | mm | PL | | | | | | | | | | | | | | |
|----------------------------|-----------------------------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|
| | | | | 92 | | | | 99 | | | | 120 | | | | | | |
| Lead | P | mm | | 12 | 18 | 24 | 30 | 12 | 18 | 24 | 30 | 15 | 20 | 25 | 30 | 35 | | |
| Number of starts of thread | N | | | 6 | | | | 6 | | | | 5 | | | | | | |
| Lead angle | | ° | | 2.38 | 3.56 | 4.75 | 5.93 | 2.19 | 3.28 | 4.37 | 5.45 | 2.28 | 3.04 | 3.79 | 4.55 | 5.3 | | |
| Single nut | Rated dynamic load | Ca | kN | 532.7 | 583.2 | 695.2 | 714.5 | 790.1 | 843.6 | 858.1 | 857.7 | 1181.8 | 1214 | 1213.9 | 1232.4 | 1220.5 | | |
| | Rated dead load | Coa | kN | 1646.6 | 1611.1 | 1886.1 | 1940.3 | 2649.6 | 2603.2 | 2610.1 | 2563.8 | 4248.3 | 4320.2 | 4234.1 | 4274.2 | 4156.9 | | |
| | Stiffness coefficient | Fk | N2/3um | 129 | 103.3 | 91.4 | 82.8 | 153.1 | 122.9 | 105.9 | 93.9 | 143 | 124.3 | 109.4 | 99.9 | 91.3 | | |
| | Axial clearance | * | mm | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | | |
| Double nut | Rated dynamic load | Ca | kN | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Rated dead load | Coa | kN | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Stiffness coefficient | Fk | N2/3um | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Pretightening force | Fv | N | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Pretension torsional moment | Mv | Nm | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Preload nut | Rated dynamic load | Ca | kN | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Rated dead load | Coa | kN | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Stiffness coefficient | Fk | N2/3um | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Pretightening force | Fv | N | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Pretension torsional moment | Mv | Nm | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Forward efficiency | | | | 0.82 | 0.86 | 0.87 | 0.88 | 0.81 | 0.85 | 0.87 | 0.88 | 0.82 | 0.85 | 0.86 | 0.87 | 0.88 | | |
| Inversion efficiency | | | | 0.79 | 0.84 | 0.86 | 0.87 | 0.78 | 0.83 | 0.85 | 0.86 | 0.78 | 0.82 | 0.84 | 0.86 | 0.86 | | |

