



ZWZ
WIND POWER BEARINGS

 **WAFANGDIAN BEARING GROUP CORP.**

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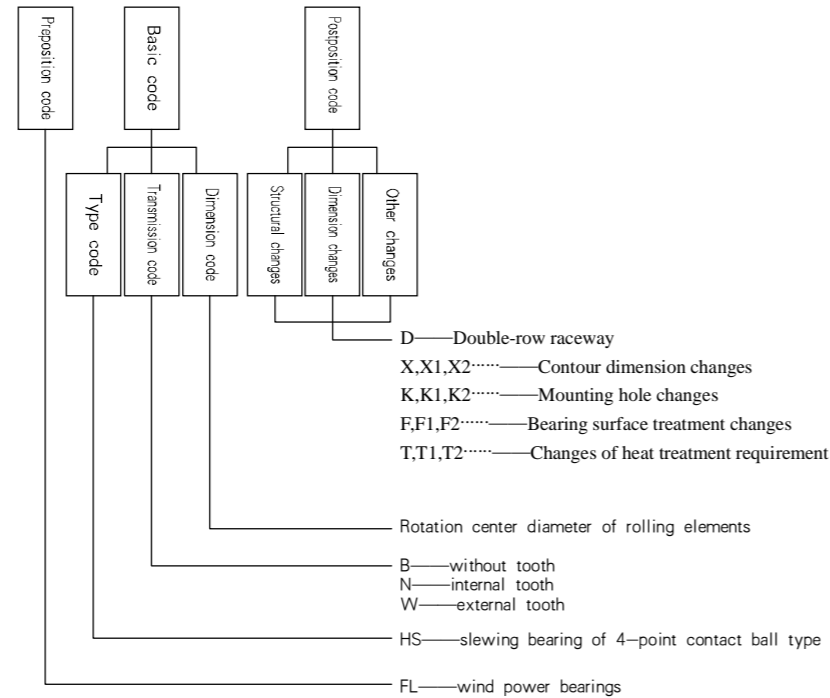
http: // www.zwz-bearing.com

WAFANGDIAN BEARING GROUP CORP.

1. Preparation method of Wind power bearing code compilation method

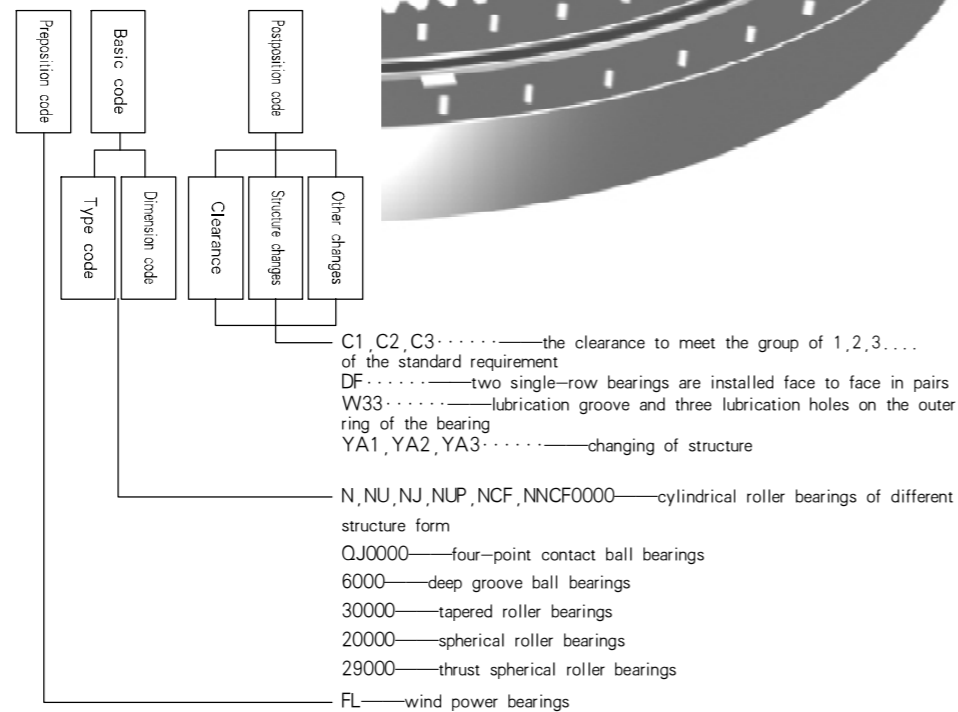
1.1 Code of Yaw bearing and Pitch bearing

The code of yaw bearing and pitch bearing consists of preposition code, basic code and postposition code.



1.2 Code of transmission system bearing

Transmission system bearings include main shaft bearings, gearbox bearings, driving device bearings and generator bearings. ZWZ transmission system bearing code consists of preposition code, basic code and postposition.



2. The structural characteristics of wind power bearings

2.1 The structural characteristics of yaw bearings and blade bearings

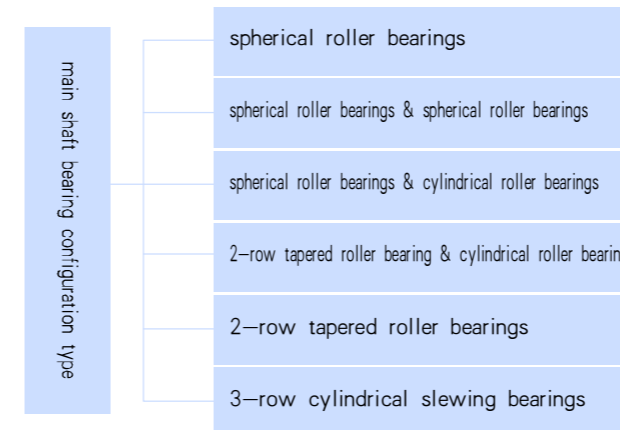
The structure of the yaw bearing and blade bearings are single-row or double-row four-point contact ball slewing bearings.

The blade bearings endure the axial force, radial force and even turning moment produced by both the blade and wind swept blade, and though the adjustment of the blade structure, it can ensure the inclination angle of the blade relative to the different wind speed.

The yaw bearings are in the top of the tower, which support the entire cabin of the wind turbine and bear the axial force, radial force and overturning moment produced by wind swept blade, and though the yaw adjustment of the yaw driving structure, it can ensure the directionality of the pod on the positive wind power.

2.2 The structural characteristics of main bearings

Due to different design of the turbine transmission system, the main bearings have a lot of structure style.



2.2 The structural characteristics of gearbox bearings

According to the using position, the gearbox bearings can divide into low speed bearings, intermediate shaft bearings and high speed end bearings. The product structure type contains cylindrical roller bearings, tapered roller bearings, spherical roller bearings, Self-aligning thrust roller bearings and four-point contact ball bearings.

2.3 The structural characteristics of dive device bearings

The diving device includes the yaw driven and pitch driven. The bearing structure type contains tapered roller bearings, spherical roller bearings, cylindrical roller bearings and deep groove ball bearings.

2.4 The structural characteristics of generator bearings

ZWZ generator bearings is insulation bearings, including deep groove ball bearings which rolling elements made by ceramic balls and cylindrical roller bearings which ring surface has performed insulated treatment.

3. The calculation of the wind power bearings type selection

Due to the wind power bearings need to ensure the high reliability and long life, ZWZ calculate every wind turbine for the bearing type selection, which includes strength calculation, life calculation, bolt strength calculations, and tooth strength calculation.

ZWZ can execute synchronous design to the bearing selection with customer's turbine design.

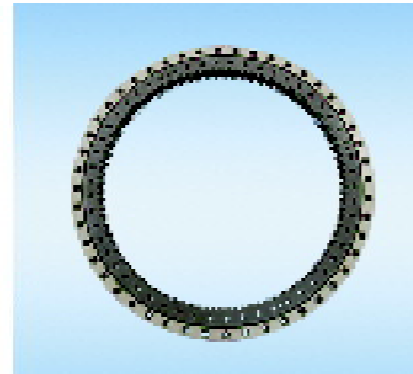
Before customers select the bearings, they need to provide bearing working load (static load, fatigue load spectrum), load coordinate system and driveline structure layout and other information to ZWZ, ZWZ calculates the bearing type selection based on the bearing application condition.

4. The assembly and maintenance of the wind power bearings

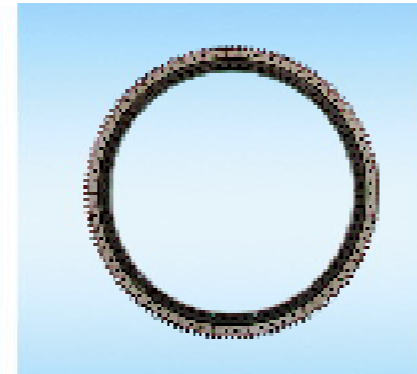
Due to the individual design of the wind power bearings, ZWZ will provide customers with detailed bearing assembly maintenance instructions to the customers when customers select ZWZ bearings.



Rotor bearings



Blade bearings



Yaw bearings



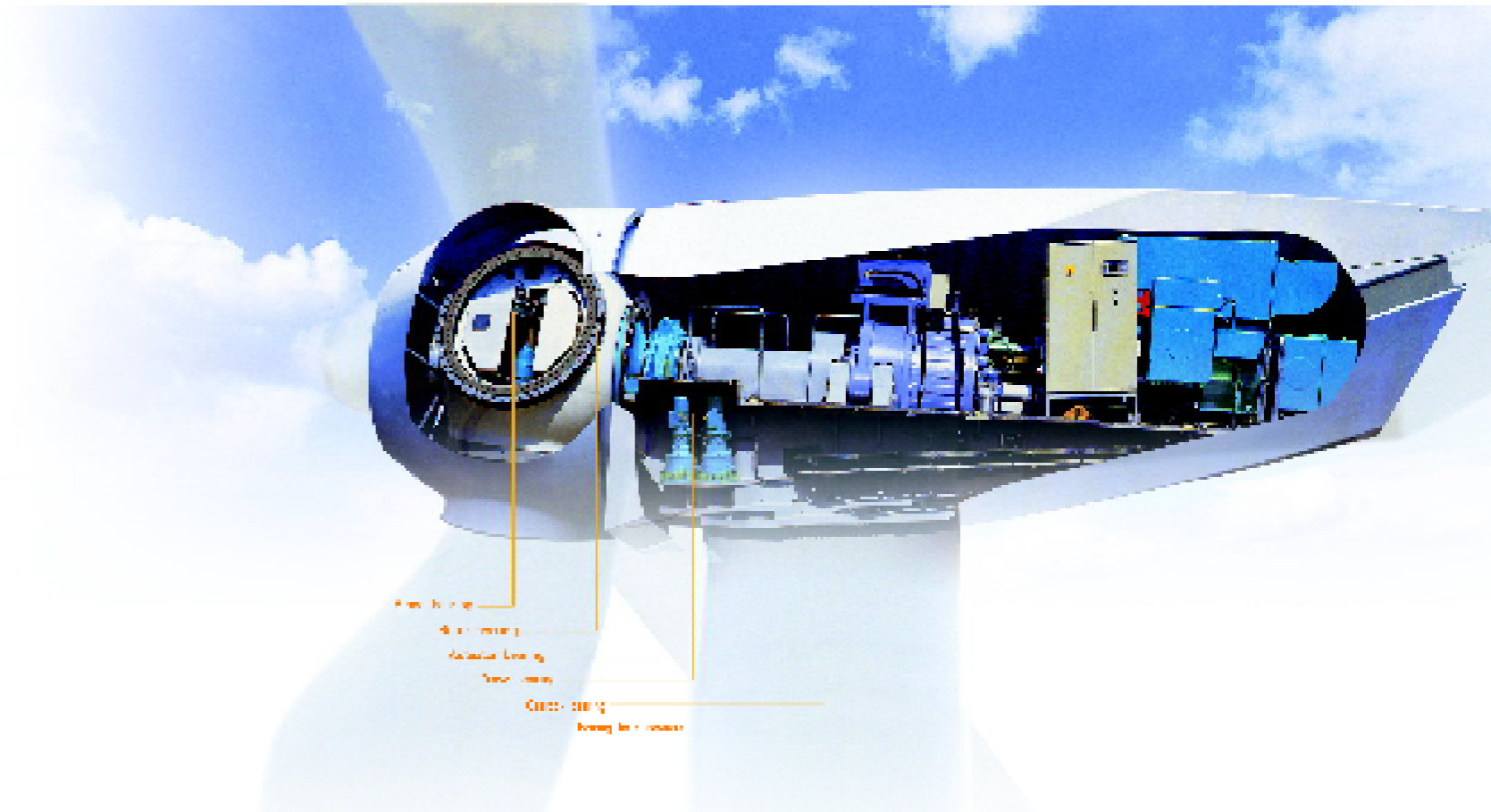
Actuator bearings



Gearbox bearings



Bearings for Generators

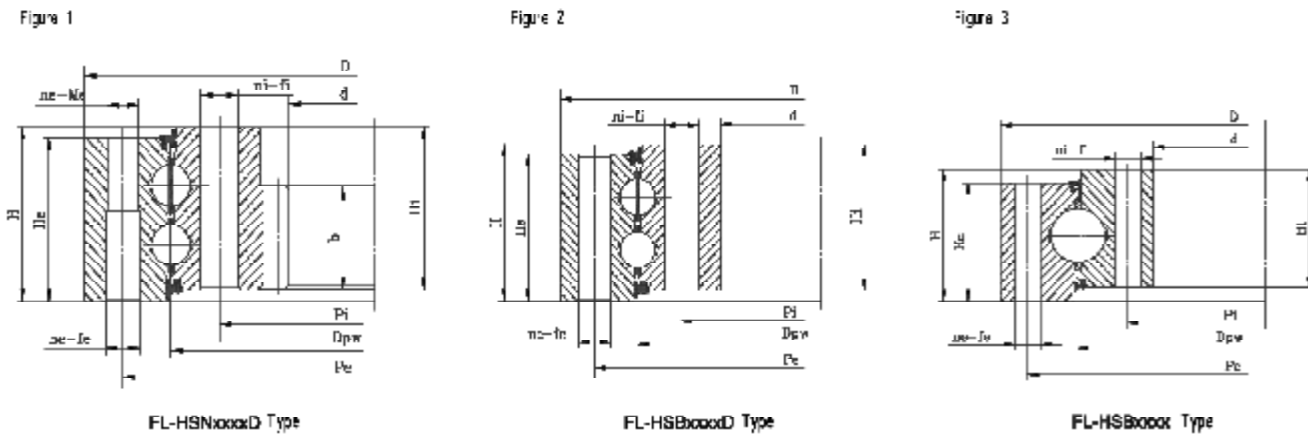


Yaw bearings

Yaw bearings are mostly single line or two lines four-point contact ball bearings with internal or external teeth, which support the main carriage of wind power generators located on the top of towers. They can ensure the proper directivity of the cabin against the positive wind by the adjustment of the yaw drive mechanism.

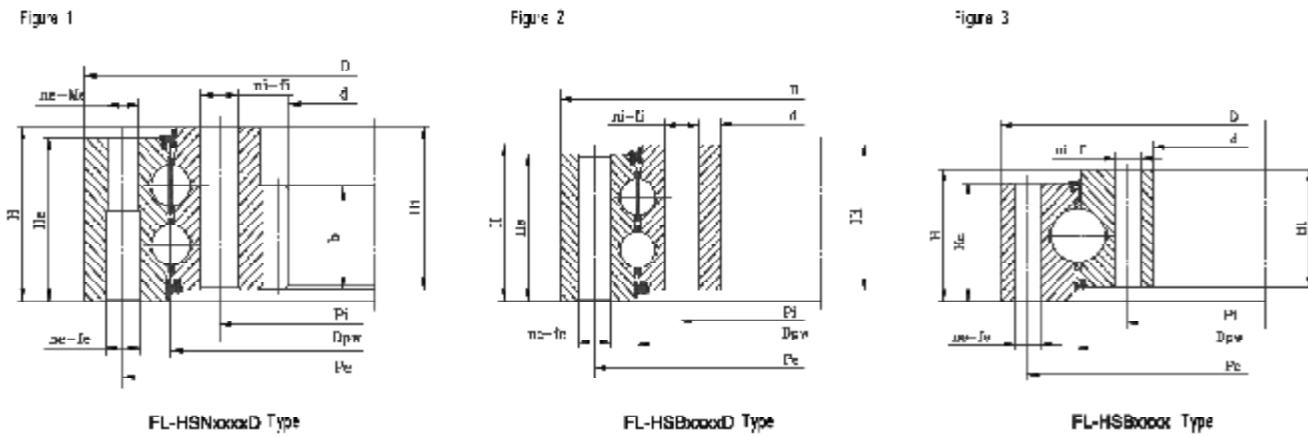
Blade bearings

Blade bearings are single line four point contact ball slewing bearings or two lines four point contact ball slewing bearings with same diameter. These bearings have internal teeth or no teeth, connecting blades and hubs. They can carry axial force, radial force and overturning moment produced by the blades together with the passing wind through them. They can ensure a proper slope angle of the blades against different wind speed by the adjustment of the blade mechanism.



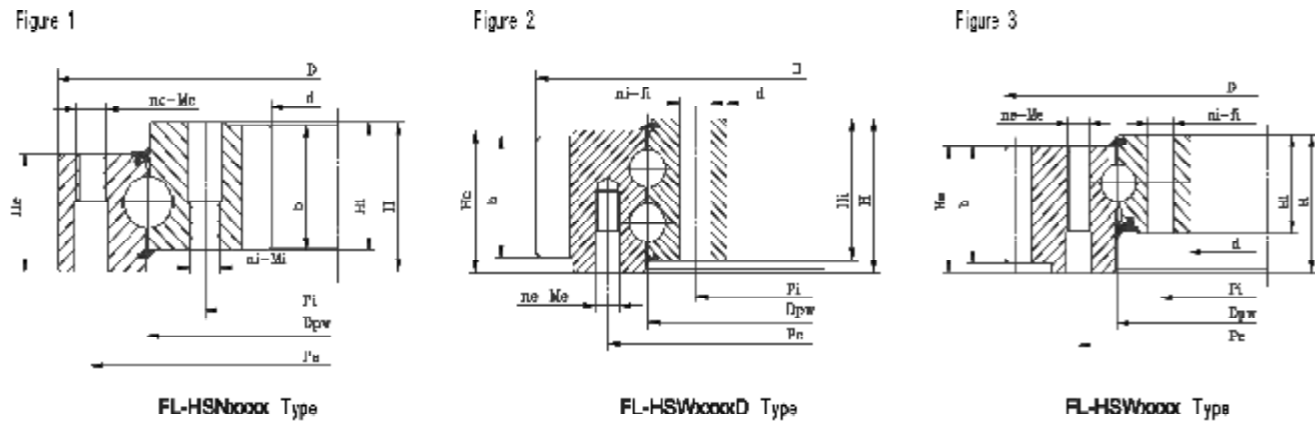
| Bearing Model | Boundary Dimension | | | | | | Mounting Dimension | | | | | | | | Gear Parameter | | | | Weight | WT |
|-------------------|--------------------|------|-----|-----|-----|--------|--------------------|------|----|----|----|----|----|----|----------------|----|-----|------|--------|--------|
| | d | D | H | Hi | He | Dpw | Pi | Pe | ni | fi | Mi | ne | fe | Me | b | m | z | x | | |
| | mm | | | | | | mm | | | | | | | | mm | | | | Kg | |
| FL-HSN420FT1 | 325 | 495 | 58 | 48 | 48 | 420 | 375 | 469 | 24 | | 12 | 24 | 14 | | 48 | 5 | 67 | 0 | 36.6 | 60kW |
| FL-HSB1100FT | 945 | 1255 | 130 | 117 | 117 | 1100 | 1000 | 1200 | 52 | 26 | | 47 | 26 | | | | | | 407 | 850KW |
| FL-HSN1715FT1 | 1454 | 1905 | 140 | 126 | 113 | 1715 | 1600 | 1830 | 50 | 33 | | 50 | 33 | | 90 | 12 | 122 | +0.5 | 918 | 1.0MW |
| FL-HSN1700DFT1 | 1470 | 1870 | 142 | 132 | 134 | 1700 | 1600 | 1800 | 50 | 33 | | 50 | 33 | | 100 | 10 | 148 | +0.5 | 878 | 1.25MW |
| FL-HSB1697DF | 1524 | 1895 | 182 | 169 | 169 | 1697 | 1590 | 1800 | 54 | 33 | | 54 | 33 | | | | | | 1110 | 1.5MW |
| FL-HSB1697DX1F | 1524 | 1895 | 182 | 169 | 169 | 1697 | 1590 | 1800 | 54 | 33 | | 64 | 33 | | | | | | 1100 | 1.5MW |
| FL-HSB1697DKF | 1524 | 1895 | 182 | 169 | 169 | 1697 | 1590 | 1800 | 60 | 33 | | 64 | 33 | | | | | | 1113 | 1.5MW |
| FL-HSN1900DFT | 1657.3 | 2080 | 144 | 135 | 133 | 1900 | 1800 | 2000 | 54 | 33 | | 48 | 33 | | 135 | 12 | 139 | +0.5 | 1180 | 1.5MW |
| FL-HSN1900DXFT1 | 1657.3 | 2080 | 169 | 159 | 159 | 1900 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1240 | 1.5MW |
| FL-HSN1900DX1FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 32 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1250 | 1.5MW |
| FL-HSN1900DX2FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 32 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1900DX2KFT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1900DX3FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1235 | 1.5MW |
| FL-HSN1900DX4FT1 | 1657.3 | 2080 | 182 | 169 | 169 | 1900 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1293 | 1.5MW |
| FL-HSN1900DX4KFT1 | 1657.3 | 2080 | 182 | 169 | 169 | 1900 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1293 | 1.5MW |
| FL-HSN1900DX5FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1235 | 1.5MW |
| FL-HSN1900DX6FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1900DX6FT2 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1900DX6KFT2 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 33 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1900DX8FT1 | 1657.3 | 2080 | 168 | 158 | 158 | 1900.5 | 1800 | 2000 | 54 | 33 | | 54 | 34 | | 100 | 12 | 139 | +0.5 | 1230 | 1.5MW |
| FL-HSN1901DFT1 | 1657.2 | 2080 | 170 | 159 | 159 | 1901 | 1800 | 2000 | 54 | 39 | | 68 | 36 | | 100 | 12 | 139 | +0.5 | 1170 | 1.5MW |
| FL-HSN1890DFT1 | 1652 | 2053 | 150 | 138 | 138 | 1890 | 1800 | 1984 | 54 | 33 | | 60 | 33 | | 120 | 14 | 119 | +0.5 | 1030 | 2.0MW |
| FL-HSN1892DFT1 | 1652 | 2053 | 160 | 148 | 150 | 1892 | 1800 | 1984 | 54 | 33 | | 60 | 33 | | 120 | 14 | 119 | +0.5 | 1040 | 2.0MW |

Notes: d: inner diameter, D: Outer diameter, H: Width of bearing, Dpw: Center diameter of roller, P: Center diameter of mounting holes, n: No. of mounting holes, f: Diameter of mounting holes, M: Diameter of screw holes, b: Gear width, m: Module, z: No. of gears, x: Addendum.
 Suffix: e: Outer ring, i: Inner ring



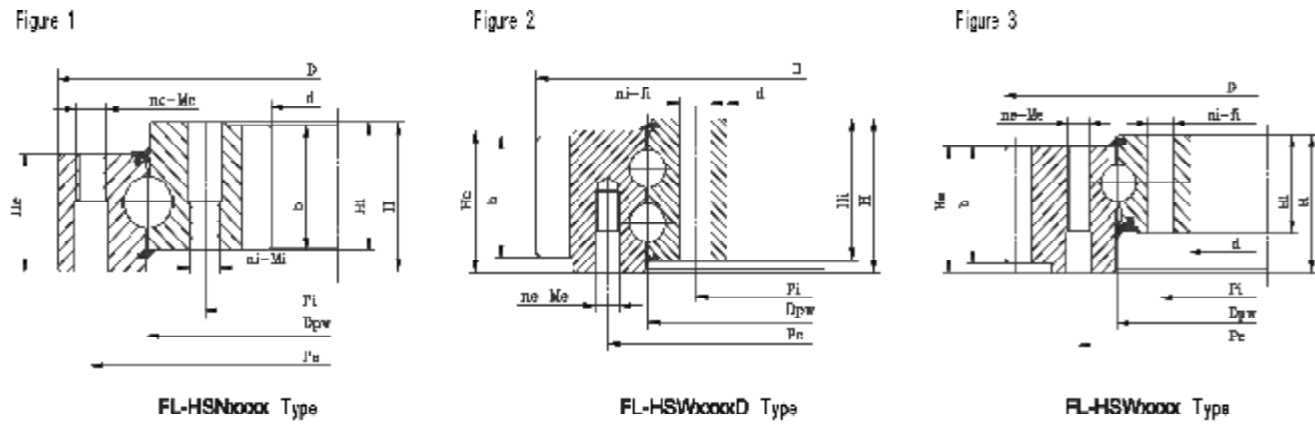
| Bearing Model | Boundary Dimension | | | | | | Mounting Dimension | | | | | | | Gear Parameter | | | | Weight | WT | |
|--------------------|--------------------|------|-----|-----|-----|------|--------------------|------|-----|----|-----|-----|----|----------------|-----|----|-----|--------|-------|-------|
| | d | D | H | Hi | He | Dpw | Pi | Pe | ni | fi | Mi | ne | fe | Me | b | m | z | | | x |
| | mm | | | | | | mm | | | | | | | mm | | | | Kg | | |
| FL-HSN1900DX7FT1 | 1652 | 2060 | 188 | 179 | 175 | 1900 | 1800 | 2000 | 64 | 30 | | 72 | 30 | | 120 | 14 | 119 | +0.5 | 1252 | 2.0MW |
| FL-HSN2217DFT1 | 1896 | 2404 | 199 | 189 | 159 | 2217 | 2110 | 2324 | 60 | 39 | | 80 | 39 | | 120 | 12 | 159 | +0.5 | 1900 | 2.0MW |
| FL-HSN2221DX4FT1 | 1920 | 2418 | 191 | 181 | 181 | 2221 | 2110 | 2332 | 64 | 33 | | 64 | 33 | | 120 | 12 | 161 | +0.5 | 1940 | 2.0MW |
| FL-HSN2221DFT1 | 1944 | 2410 | 179 | 169 | 169 | 2215 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1680 | 2.0MW |
| FL-HSN2221DX1FT1 | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX1FT1-B | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX1KFT1 | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX1K2FT1 | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX3FT1 | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX3KFT1 | 1944 | 2410 | 199 | 189 | 189 | 2221 | 2110 | 2332 | 60 | 39 | | 60 | 39 | | 120 | 12 | 163 | +0.5 | 1850 | 2.0MW |
| FL-HSN2221DX5FT1 | 1946.4 | 2410 | 178 | 168 | 168 | 2221 | 2110 | 2332 | 64 | 33 | | 80 | 33 | | 120 | 12 | 163 | +0.5 | 1610 | 2.0MW |
| FL-HSN2221DX2FT1 | 1956 | 2410 | 200 | 191 | 189 | 2221 | 2110 | 2330 | 60 | 39 | | 60 | 39 | | 100 | 12 | 164 | +0.5 | 1800 | 2.0MW |
| FL-HSN2225DFT1 | 1960 | 2420 | 196 | 184 | 184 | 2225 | 2110 | 2340 | 60 | 39 | | 60 | 39 | 36 | 125 | 14 | 141 | 0.5 | 1790 | 2.0MW |
| FL-HSN2225DKF1T1 | 1960 | 2420 | 196 | 184 | 184 | 2225 | 2110 | 2340 | 64 | 33 | | 60 | 39 | 36 | 125 | 14 | 141 | 0.5 | 1810 | 2.0MW |
| FL-HSN2225DX1FT1 | 1960 | 2420 | 192 | 182 | 182 | 2225 | 2110 | 2340 | 60 | 39 | | 60 | 39 | | 125 | 14 | 141 | 0.5 | 1740 | 2.0MW |
| FL-HSN2203DFT1 | 1956 | 2392 | 181 | 171 | 171 | 2203 | 2100 | 2306 | 60 | 39 | | 60 | 39 | | 100 | 12 | 164 | +0.5 | 1450 | 2.1MW |
| FL-HSB2421DFT | 2226 | 2647 | 237 | 224 | 224 | 2421 | 2300 | 2552 | 54 | 39 | | 54 | 39 | | | | | | 2400 | 2.3MW |
| FL-HSN2410DX1FT2 | 2144 | 2615 | 197 | 184 | 184 | 2410 | 2300 | 2520 | 64 | 39 | | 92 | 39 | | 135 | 16 | 135 | +0.5 | 1955 | 3.0MW |
| FL-HSN2410DFT1 | 2147 | 2620 | 195 | 182 | 182 | 2410 | 2300 | 2520 | 64 | 39 | | 82 | 39 | | 135 | 16 | 135 | +0.5 | 1930 | 3.0MW |
| FL-HSB2640DFT | 2420 | 2920 | 282 | 259 | 280 | 2640 | 2500 | 2780 | 72 | 39 | 100 | 39 | | | | | | 3780 | 3.6MW | |
| FL-HSN3350DFT1 | 2964 | 3620 | 264 | 251 | 251 | 3350 | 3127 | 3500 | 128 | 39 | | 126 | 39 | | 160 | 20 | 149 | +0.5 | 5160 | 5.0MW |
| FL-HSN3340DFT1 | 2988 | 3675 | 272 | 259 | 259 | 3340 | 3139 | 3480 | 96 | 45 | | 112 | 45 | | 120 | 18 | 167 | +0.5 | 5700 | 6.0MW |

Notes: d: inner diameter, D: Outer diameter, H: Width of bearing, Dpw: Center diameter of roller, P: Center diameter of mounting holes, n: No. of mounting holes, f: Diameter of mounting holes, M: Diameter of screw holes, b: Gear width, m: Module, z: No. of gears, x: Addendum.
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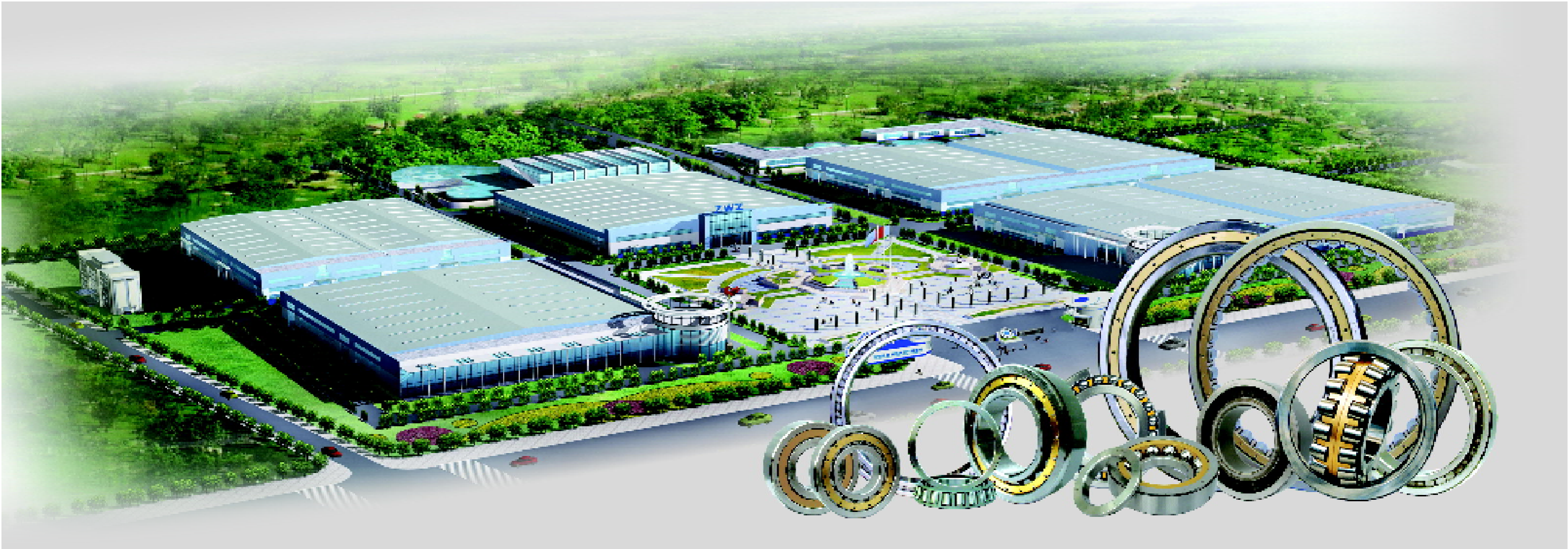
| Bearing Model | Boundary Dimension | | | | | | Mounting Dimension | | | | | | | | | Gear Parameter | | | | Weight Kg | WT |
|------------------|--------------------|--------|-----|-----|-----|------|--------------------|------|-----|----|----|-----|----|--------|------|----------------|-----|------|------|--------------|----|
| | d | D | H | Hi | He | Dpw | Pi | Pe | ni | fi | Mi | ne | fe | Me | b | m | z | x | | | |
| | mm | | | | | | mm | | | | | | | | | mm | | | | | |
| FL-HSW800FT1 | 710 | 924 | 67 | 58 | 58 | 800 | 744 | 854 | 30 | 13 | | 30 | | 12 | 58 | 6 | 152 | 0 | 108 | 60kW | |
| FL-HSN1872FT1 | 1628 | 2051 | 140 | 120 | 110 | 1872 | 1759 | 1985 | 48 | 33 | 30 | 48 | 33 | 30 | 120 | 14 | 118 | 0 | 931 | 1.0MW | |
| FL-HSN2182FT | 1988 | 2299 | 109 | 100 | 72 | 2182 | 2108 | 2255 | 60 | 22 | 20 | 16 | 22 | 44-M20 | 99.5 | 14 | 143 | +0.5 | 595 | 1.0MW | |
| FL-HSW2330DFT1 | 2137 | 2616 | 183 | 169 | 169 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30.3 | 145 | 20 | 128 | +0.5 | 1830 | 1.5MW | |
| FL-HSW2330DX1FT1 | 2135 | 2616 | 185 | 170 | 170 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30 | 145 | 20 | 128 | +0.5 | 1830 | 1.5MW | |
| FL-HSW2330DX2FT1 | 2135 | 2616 | 185 | 170 | 170 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30 | 145 | 20 | 128 | +0.5 | 1830 | 1.5MW | |
| FL-HSW2330DX3FT1 | 2135 | 266 | 185 | 170 | 171 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30 | 147 | 20 | 128 | +0.5 | 1900 | 1.5MW | |
| FL-HSW2330DX5FT1 | 2135 | 2616 | 185 | 170 | 170 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30 | 147 | 20 | 128 | +0.5 | 1890 | 1.5MW | |
| FL-HSW2330DX6FT1 | 2135 | 2636 | 204 | 169 | 190 | 2330 | 2215 | 2436 | 68 | 39 | | 64 | 33 | 30 | 145 | 20 | 129 | +0.5 | 2110 | 1.5MW | |
| FL-HSW2355FT1 | 2184 | 2626.9 | 130 | 109 | 121 | 2355 | 2250 | 2460 | 75 | 33 | | 76 | 33 | 30 | 120 | 18 | 143 | +0.5 | 1211 | 1.5MW | |
| FL-HSW2355X1FT1 | 2184 | 2626.4 | 159 | 109 | 150 | 2355 | 2250 | 2460 | 75 | 33 | | 76 | 33 | 30 | 120 | 18 | 143 | +0.5 | 1360 | 1.5MW | |
| FL-HSW2600FT1 | 2422 | 2858 | 151 | 116 | 135 | 2600 | 2496 | 2706 | 84 | 33 | | 84 | 39 | 36 | 135 | 16 | 177 | +0.5 | 1470 | 1.5MW | |
| FL-HSN2718FT1 | 2469.6 | 2908 | 137 | 124 | 95 | 2718 | 2615 | 2830 | 90 | 30 | 27 | 90 | 30 | | 120 | 18 | 138 | +0.5 | 1240 | 1.5MW | |
| FL-HSN2718FT1S | 2469.6 | 2908 | 137 | 124 | 95 | 2718 | 2615 | 2830 | 90 | 30 | 27 | 90 | 30 | | 120 | 18 | 138 | +0.5 | 1240 | 1.5MW | |
| FL-HSN2718F1T1 | 2469.6 | 2908 | 137 | 124 | 95 | 2718 | 2615 | 2830 | 90 | 30 | 27 | 90 | 30 | | 120 | 18 | 138 | +0.5 | 1240 | 1.5MW | |
| FL-HSW2718FT1 | 2560 | 3020.4 | 137 | 97 | 125 | 2718 | 2630 | 2806 | 100 | 26 | | 100 | 26 | 24 | 120 | 18 | 165 | +0.5 | 1550 | 1.5MW | |
| FL-HSW2765F1T2 | 2617 | 3002.4 | 137 | 92 | 125 | 2765 | 2677 | 2850 | 84 | 30 | | 84 | 30 | 27 | 120 | 18 | 164 | +0.5 | 1187 | 1.5MW | |
| FL-HSW2765FT1 | 2617 | 3002.4 | 137 | 92 | 125 | 2765 | 2677 | 2850 | 84 | 30 | | 84 | 30 | 27 | 120 | 18 | 164 | +0.5 | 1190 | 1.5MW | |
| FL-HSN2297FT1 | 2034 | 2500 | 170 | 160 | 120 | 2297 | 2194 | 2441 | 72 | 33 | 30 | 72 | 33 | 30 | 149 | 18 | 114 | +0.5 | 1500 | 2.0MW | |
| FL-HSW2462DFT1 | 2274 | 2750 | 170 | 160 | 150 | 2462 | 2354 | 2568 | 60 | 39 | | 60 | 39 | 36 | 125 | 20 | 135 | +0.5 | 1660 | 2.0MW | |
| FL-HSN2690FT1 | 2380 | 2900 | 162 | 150 | 140 | 2690 | 2560 | 2820 | 90 | 36 | 33 | 84 | 36 | 33 | 140 | 20 | 120 | +0.5 | 2000 | 2.0MW | |
| FL-HSN2690X1FT1 | 2380 | 2900 | 189 | 175 | 140 | 2690 | 2560 | 2820 | 90 | 36 | 33 | 84 | 36 | 33 | 165 | 20 | 120 | +0.5 | 2190 | 2.0MW | |

Notes: d: inner diameter, D: Outer diameter, H: Width of bearing, Dpw: Center diameter of roller, P: Center diameter of mounting holes, n: No. of mounting holes, f: Diameter of mounting holes, M: Diameter of screw holes, b: Gear width, m: Module, z: No. of gears, x: Addendum.
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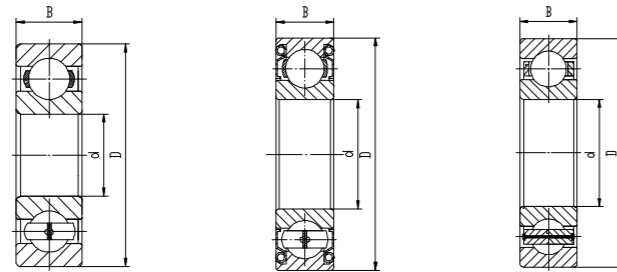
| Bearing Model | Boundary Dimension | | | | | | Mounting Dimension | | | | | | | | Gear Parameter | | | | Weight Kg | WT |
|-----------------|--------------------|--------|-----|-----|-----|------|--------------------|------|-----|----|----|-----|----|----|----------------|----|-----|------|--------------|-------|
| | d | D | H | Hi | He | Dpw | Pi | Pe | ni | fi | Mi | ne | fe | Me | b | m | z | x | | |
| | mm | | | | | | mm | | | | | | | | mm | | | | Kg | |
| FL-HSW2775FT1 | 2520 | 3136 | 160 | 125 | 145 | 2775 | 2665 | 2885 | 96 | 39 | | 96 | 39 | 36 | 135 | 20 | 154 | +0.5 | 2396 | 2.0MW |
| FL-HSW2804FT1 | 2617 | 3096 | 159 | 124 | 149 | 2804 | 2698 | 2908 | 64 | 39 | | 64 | 39 | 36 | 135 | 20 | 152 | +0.5 | 1870 | 2.0MW |
| FL-HSW2849FT1 | 2657 | 3136 | 140 | 116 | 125 | 2849 | 2743 | 2955 | 96 | 39 | | 96 | 39 | 36 | 125 | 20 | 154 | +0.5 | 1600 | 2.0MW |
| FL-HSN2980FT1 | 2664 | 3180 | 144 | 134 | 123 | 2980 | 2860 | 3100 | 72 | 39 | 36 | 72 | 39 | | 125 | 20 | 134 | +0.5 | 1960 | 2.0MW |
| FL-HSN2980FT1T | 2664 | 3180 | 144 | 134 | 123 | 2980 | 2860 | 3100 | 72 | 39 | 36 | 72 | 39 | | 125 | 20 | 134 | +0.5 | 1960 | 2.0MW |
| FL-HSN2980X1FT1 | 2664 | 3180 | 144 | 134 | 123 | 2980 | 2860 | 3100 | 72 | 39 | 36 | 72 | 39 | | 125 | 20 | 134 | +0.5 | 1960 | 2.0MW |
| FL-HSN2980X2FT1 | 2664 | 3180 | 193 | 179 | 127 | 2980 | 2860 | 3100 | 72 | 39 | 36 | 72 | 39 | | 170 | 20 | 134 | +0.5 | 2410 | 2.0MW |
| FL-HSN2980X3FT1 | 2664 | 3280 | 144 | 132 | 125 | 2980 | 2860 | 3100 | 72 | 39 | 36 | 72 | 39 | | 120 | 20 | 134 | +0.5 | 1960 | 2.0MW |
| FL-HSW2775DFT1 | 2560 | 3141.6 | 212 | 185 | 199 | 2775 | 2660 | 2890 | 96 | 39 | | 96 | | 36 | 189 | 22 | 140 | +0.5 | 3200 | 3.0MW |
| FL-HSN3040FT1 | 2757.6 | 3250 | 135 | 126 | 132 | 3040 | 2920 | 3160 | 100 | 33 | 30 | 99 | 33 | | 125.5 | 18 | 154 | +0.5 | 1940 | 3.0MW |
| FL-HSN3035FT1 | 2757.6 | 3240 | 135 | 126 | 122 | 3035 | 2920 | 3150 | 116 | 33 | 30 | 118 | 33 | 30 | 125 | 18 | 154 | +0.5 | 1840 | 3.6MW |
| FL-HSW4340DFT1 | 4100 | 4703.6 | 219 | 205 | 205 | 4340 | 4200 | 4480 | 120 | 42 | | 120 | 42 | 39 | 190 | 22 | 211 | +0.5 | 5400 | 5.0MW |
| FL-HSW4652DFT1 | 4420 | 5011.2 | 204 | 191 | 190 | 4652 | 4514 | 4790 | 130 | 42 | | 132 | 42 | 39 | 174 | 24 | 206 | +0.5 | 5170 | 5.0MW |
| FL-HSW3960DFT1 | 3712 | 4387.2 | 220 | 207 | 210 | 3960 | 3832 | 4089 | 108 | 39 | | 108 | 39 | 36 | 200 | 24 | 180 | +0.5 | 5810 | 6.0MW |

Notes: d: inner diameter, D: Outer diameter, H: Width of bearing, Dpw: Center diameter of roller, P: Center diameter of mounting holes, n: No. of mounting holes, f: Diameter of mounting holes, M: Diameter of screw holes, b: Gear width, m: Module, z: No. of gears, x: Addendum.
 Effix: e: Outer ring, i: Inner ring

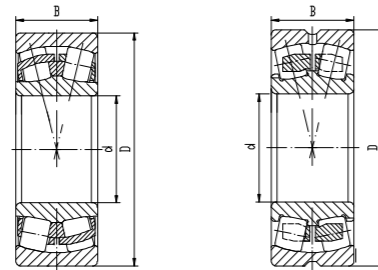


Gearbox bearings

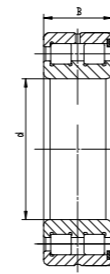
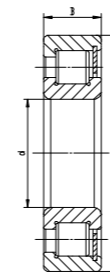
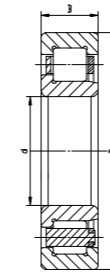
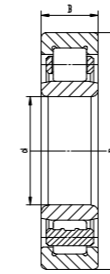
There are many kinds of bearings for gearbox including spherical roller bearings, cylindrical roller bearings, thrust roller bearings, four point contact ball bearings and tapered roller bearings, etc.



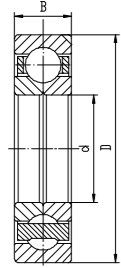
| Bearing Model | Boundary Dimension | | | | Basic load rating | | Speed ratings rpm | | Weight Kg |
|---------------|--------------------|-----|----|-------------------|-------------------|------|-------------------|-------|--------------|
| | d | D | B | r _{smin} | Cr | Cor | Grease | Oil | |
| | mm | | | | KN | | r/min | | |
| FL-6005/C3 | 25 | 47 | 12 | 0.6 | 10 | 5.85 | 31000 | 37000 | 0.0787 |
| FL-6010 | 50 | 80 | 16 | 1 | 20.8 | 15.4 | 17500 | 21000 | 0.255 |
| FL-6210 | 50 | 90 | 20 | 1.1 | 33.0 | 21.8 | 14000 | 18000 | 0.474 |
| FL-6216-2Z | 80 | 140 | 26 | 2 | 66 | 50 | 3600 | 4500 | 1.50 |
| FL-6026 | 130 | 200 | 33 | 2 | 100 | 94 | 5800 | 7000 | 3.29 |
| FL-61984MA/C3 | 420 | 560 | 65 | 4 | 320 | 520 | 1800 | 2100 | 46.2 |



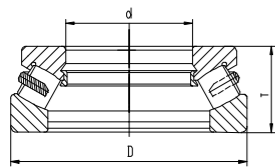
| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight Kg | WT |
|---------------|--------------------|-----|-----|-------------------|------|--------------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | | |
| FL-23226C/W33 | 130 | 230 | 80 | 580 | 910 | 14.9 | 800KW |
| FL-23232C/W33 | 160 | 290 | 104 | 1020 | 1600 | 36.1 | 800KW |
| FL-23134C/W33 | 170 | 280 | 88 | 870 | 1450 | 22.8 | 800KW |
| FL-23964C/W33 | 320 | 440 | 90 | 1219 | 2650 | 39.5 | 800KW |
| FL-23140C/W33 | 200 | 340 | 112 | 1340 | 2240 | 41.6 | 1.5MW |
| FL-22340C/W33 | 200 | 420 | 138 | 2000 | 2870 | 92.0 | 1.5MW |
| FL-23060C/W33 | 300 | 460 | 118 | 1770 | 3450 | 69.5 | 1.5MW |
| FL-23072C/W33 | 360 | 540 | 134 | 2280 | 4800 | 124 | 1.5MW |
| FL-23240/W33 | 200 | 360 | 128 | 1490 | 2370 | 56.5 | 2.0MW |
| FL-22344/W33 | 220 | 460 | 145 | 2120 | 3160 | 122 | 2.0MW |
| FL-23068/W33 | 340 | 520 | 133 | 2070 | 3870 | 107 | 2.0MW |
| FL-23992/W33 | 460 | 620 | 118 | 2040 | 4570 | 105 | 2.0MW |



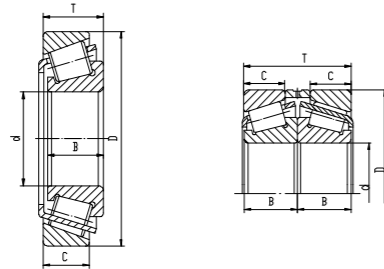
| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight Kg | WT |
|---------------------|--------------------|-----|-----|-------------------|------|--------------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | | |
| FL-NU1016M | 80 | 125 | 22 | 60 | 80 | 1.1 | 800KW |
| FL-NU2222EM | 110 | 200 | 53 | 370 | 500 | 7.63 | 800KW |
| FL-NJ2232EM | 160 | 290 | 80 | 810 | 1190 | 24.7 | 800KW |
| FL-NCF1868V | 340 | 420 | 38 | 440 | 940 | 11.5 | 800KW |
| FL-NCF1892V | 460 | 580 | 56 | 1050 | 2100 | 34.4 | 800KW |
| FL-NJ2324EQ1A | 120 | 260 | 86 | 860 | 1040 | 24.1 | 1.5MW |
| FL-NJ2324EQ1A/C3 | 120 | 260 | 86 | 860 | 1040 | 24.1 | 1.5MW |
| FL-NU1026M | 130 | 200 | 33 | 192 | 274 | 4.64 | 1.5MW |
| FL-NU2226EMA/C3 | 130 | 230 | 64 | 595 | 795 | 11.2 | 1.5MW |
| FL-NU2326MA | 130 | 280 | 93 | 920 | 1230 | 28.7 | 1.5MW |
| FL-NU326EMA | 130 | 280 | 58 | 595 | 795 | 18.7 | 1.5MW |
| FL-NU2228EMA/C3 | 140 | 250 | 68 | 574 | 836 | 14.2 | 1.5MW |
| FL-NJ2330V | 150 | 320 | 108 | 1380 | 1930 | 42.7 | 1.5MW |
| FL-NNCF5034V/C3 | 170 | 260 | 122 | 1060 | 2120 | 21.4 | 1.5MW |
| FL-NU234EM | 170 | 310 | 52 | 640 | 870 | 18.4 | 1.5MW |
| FL-NJ334M | 170 | 360 | 72 | 857 | 1040 | 38.4 | 1.5MW |
| FL-NJ2334V | 170 | 360 | 120 | 1700 | 2410 | 59.9 | 1.5MW |
| FL-NU2236EM | 180 | 320 | 86 | 1040 | 1580 | 31.1 | 1.5MW |
| FL-NJ2240EM | 200 | 360 | 98 | 1120 | 1900 | 44.1 | 1.5MW |
| FL-NNCF5044V/C3 | 220 | 340 | 160 | 1750 | 3650 | 53.1 | 1.5MW |
| FL-NJ244M | 220 | 400 | 65 | 839 | 1220 | 35.4 | 1.5MW |
| FL-NCF2244V | 220 | 400 | 108 | 1710 | 2530 | 53.1 | 1.5MW |
| FL-NCF2952V/C3 | 260 | 360 | 60 | 730 | 1390 | 17.0 | 1.5MW |
| FL-NU1964EMA | 320 | 440 | 56 | 670 | 1150 | 24.7 | 1.5MW |
| FL-NU1072M | 360 | 540 | 82 | 1450 | 2080 | 64.8 | 1.5MW |
| FL-NCF2888V | 440 | 540 | 60 | 1020 | 2550 | 28.9 | 1.5MW |
| FL-NCF29/530V | 530 | 710 | 106 | 2600 | 5600 | 110 | 1.5MW |
| FL-NCF18/530V | 530 | 650 | 56 | 1020 | 2320 | 33.9 | 1.5MW |
| FL-NCF18/600V/HCEC9 | 600 | 730 | 60 | 1180 | 2950 | 50.5 | 1.5MW |
| FL-NCF18/670V | 670 | 820 | 69 | 1320 | 3230 | 72.2 | 1.5MW |
| FL-NU1028M | 140 | 210 | 33 | 183 | 263 | 3.89 | 2.0MW |
| FL-NU2330EMA | 150 | 320 | 108 | 1140 | 1570 | 42.6 | 2.0MW |
| FL-NU332EMA | 160 | 340 | 68 | 870 | 1080 | 31.4 | 2.0MW |
| FL-NNCF5052V/C3 | 260 | 400 | 190 | 2370 | 4950 | 85.9 | 2.0MW |
| FL-NJ2980/HCEC9 | 400 | 540 | 82 | 1340 | 2780 | 56.2 | 2.0MW |
| FL-NJ2892/HCEC9 | 460 | 580 | 72 | 1090 | 2480 | 46.1 | 2.0MW |
| FL-NU29/560/C3 | 560 | 750 | 112 | 2470 | 5570 | 146 | 2.0MW |
| FL-NCF18/600V | 600 | 730 | 60 | 1180 | 2950 | 50.5 | 2.0MW |
| FL-NCF18/530V/CNL | 530 | 650 | 56 | 1020 | 2320 | 33.9 | 2.0MW |
| FL-NCF18/600V/CNL | 600 | 730 | 60 | 1180 | 2950 | 50.5 | 2.0MW |
| FL-NCF28/800V/HCEC9 | 800 | 980 | 106 | 2860 | 7900 | 168 | 2.0MW |
| FL-NCF28/750V | 750 | 920 | 100 | 2720 | 6590 | 140 | 2.0MW |



| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|---------------|--------------------|-----|----|-------------------|-----|--------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-QJ222N2 | 110 | 200 | 38 | 250 | 285 | 5.37 | 800KW |
| FL-QJ324N2 | 120 | 260 | 55 | 310 | 515 | 15.2 | 1.5MW |
| FL-QJ226N2 | 130 | 230 | 40 | 290 | 370 | 7.5 | 1.5MW |
| FL-QJ326N2 | 130 | 280 | 58 | 420 | 560 | 20.1 | 1.5MW |
| FL-QJ228N2 | 140 | 250 | 42 | 315 | 410 | 9.63 | 1.5MW |
| FL-QJ332N2 | 160 | 340 | 68 | 540 | 785 | 32.7 | 2.0MW |



| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|---------------|--------------------|-----|----|-------------------|------|--------|-------|
| | d | D | T | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-29268 | 340 | 460 | 73 | 1380 | 6450 | 34.7 | 1.5MW |

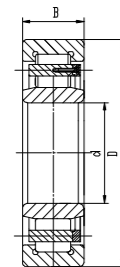
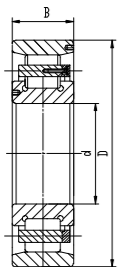
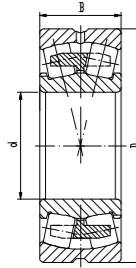
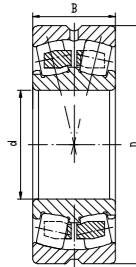
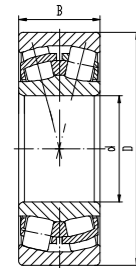


| Bearing Model | Boundary Dimension | | | | | Basic load rating | | Weight | WT |
|------------------------|--------------------|--------|--------|--------|--------|-------------------|-------|--------|-------|
| | d | D | B | T | C | Cr | Cor | | |
| | mm | | | | | KN | | Kg | |
| FL-31328/DF | 140 | 300 | 70 | 154 | 47 | 1100 | 1850 | 50.3 | 1.5MW |
| FL-30230 | 150 | 270 | 45 | 49 | 38 | 465 | 630 | 10.6 | 1.5MW |
| FL-32230 | 150 | 270 | 73 | 77 | 60 | 750 | 1230 | 18.4 | 1.5MW |
| FL-32234/DF | 170 | 310 | 86 | 182 | 71 | 1700 | 3250 | 62.4 | 1.5MW |
| FL-32044 | 220 | 340 | 76 | 76 | 57 | 850 | 1520 | 24.2 | 1.5MW |
| FL-32948X2A | 240 | 320 | 48 | 51 | 41 | 395 | 790 | 10.8 | 1.5MW |
| FL-32056 | 280 | 420 | 87 | 87 | 65 | 1200 | 2300 | 40.4 | 1.5MW |
| FL-32964X2A | 320 | 440 | 72 | 76 | 62 | 960 | 1940 | 32.1 | 1.5MW |
| FL-KHM262749/KMH262710 | 346.075 | 488.95 | 95.250 | 95.250 | 74.612 | 1420 | 2900 | 52.1 | 1.5MW |
| FL-32972 | 360 | 480 | 76 | 76 | 57 | 1020 | 2390 | 38.5 | 1.5MW |
| FL-32972/DF | 360 | 480 | 76 | 152 | 57 | 1570 | 4780 | 79.2 | 1.5MW |
| FL-KM270749/KM270710 | 447.675 | 635 | 120.65 | 120.65 | 95.25 | 2150 | 4830 | 118 | 1.5MW |
| FL-KEE649240/K649310 | 609.6 | 787.4 | 93.662 | 93.662 | 69.85 | 1920 | 4750 | 110 | 1.5MW |
| FL-KLL481448/KLL481411 | 673.1 | 793.75 | 61.912 | 66.675 | 49.212 | 1040 | 2960 | 52.3 | 1.5MW |
| FL-KEE763330/K763410 | 838.2 | 1041.4 | 88.9 | 93.662 | 66.675 | 2230 | 5460 | 158 | 1.5MW |
| FL-32956 | 280 | 380 | 63.5 | 63.5 | 48 | 740 | 1540 | 20.1 | 2.0MW |
| FL-32972/YA5 | 360 | 480 | 76 | 76 | 57 | 1100 | 2540 | 37.4 | 2.0MW |
| FL-306/500 | 500 | 640 | 80 | 80 | 60 | 1350 | 3260 | 60.7 | 2.0MW |
| FL-3506/938X4 | 938.212 | 1270 | 169.1 | 406.2 | 266.5 | 9040 | 29000 | 1440 | 2.0MW |



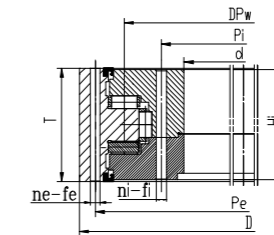
Rotor bearings

Rotor bearings support the blades, hubs and blade system of wind power equipments by the Rotor and transmit the torque produced by the passing wind through the blades. Rotor bearings are mostly spherical roller bearings and taper roller bearings.

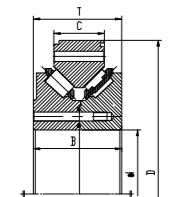
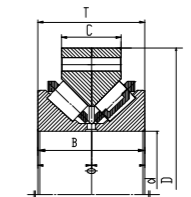
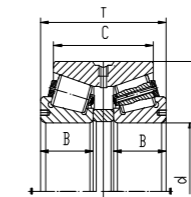
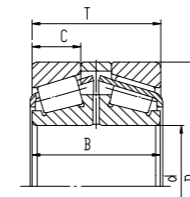


| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|-------------------|--------------------|------|-----|-------------------|-------|--------|--------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-23064/W33 | 320 | 480 | 121 | 1870 | 3560 | 78.1 | 850KW |
| FL-23160C/W33 | 300 | 500 | 160 | 2710 | 4900 | 128 | 850KW |
| FL-240/560/W33 | 560 | 820 | 258 | 5950 | 13500 | 472 | 1.0MW |
| FL-230/630CA/W33 | 630 | 920 | 212 | 5900 | 12800 | 473 | 1.25MW |
| FL-240/530/W33 | 530 | 780 | 250 | 5300 | 12100 | 416 | 1.5MW |
| FL-240/600/W33 | 600 | 870 | 272 | 7690 | 15900 | 550 | 1.5MW |
| FL-240/600/W33-DQ | 600 | 870 | 272 | 7690 | 15900 | 550 | 1.5MW |
| FL-240/600/CNMW33 | 600 | 870 | 272 | 7690 | 15900 | 550 | 1.5MW |
| FL-240/630/W33 | 630 | 920 | 290 | 7350 | 17100 | 661 | 1.5MW |
| FL-239/670CA/W33 | 670 | 900 | 170 | 4370 | 10600 | 315 | 1.5MW |
| FL-230/800/YAD | 800 | 1150 | 258 | 9110 | 19000 | 899 | 1.5MW |
| FL-239/800/CA | 800 | 1060 | 195 | 5750 | 14200 | 481 | 1.5MW |
| FL-240/800/W520 | 800 | 1150 | 345 | 11000 | 26000 | 1200 | 1.5MW |
| FL-24188/W33 | 440 | 720 | 280 | 6500 | 12100 | 460 | 2.0MW |
| FL-230/630CA/W33 | 630 | 920 | 212 | 5900 | 12800 | 473 | 2.0MW |
| FL-240/600/W33 | 600 | 870 | 272 | 7690 | 15900 | 550 | 2.0MW |
| FL-240/710/W33 | 710 | 1030 | 315 | 8970 | 21200 | 888 | 2.0MW |
| FL-239/750CA/W33 | 750 | 1000 | 185 | 5730 | 12900 | 414 | 2.0MW |
| FL-240/750/W33 | 750 | 1090 | 335 | 11800 | 25000 | 1072 | 2.0MW |
| FL-230/800/W33 | 800 | 1150 | 258 | 9110 | 19000 | 904 | 2.0MW |
| FL-239/900CA/W33 | 900 | 1180 | 206 | 6850 | 16400 | 616 | 2.0MW |
| FL-230/800-SMS | 800 | 1150 | 258 | 9300 | 19500 | 899 | 2.3MW |
| FL-240/710/W33 | 710 | 1030 | 315 | 8970 | 21200 | 888 | 3.0MW |
| FL-240/850CA/W33 | 850 | 1220 | 365 | 11400 | 29700 | 1416 | 3.0MW |
| FL-240/900/W26 | 900 | 1280 | 375 | 11700 | 32100 | 1610 | 3.0MW |

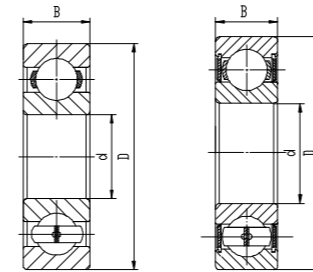
| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|----------------|--------------------|------|-----|-------------------|-------|--------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-N6/1200/YAD | 1200 | 1520 | 185 | 6240 | 17000 | 810 | 1.5MW |
| FL-NU6/1200 | 1200 | 1520 | 185 | 6240 | 17000 | 832 | 1.5MW |
| FL-N18/1600 | 1600 | 1950 | 155 | 6640 | 18500 | 1060 | 3.0MW |



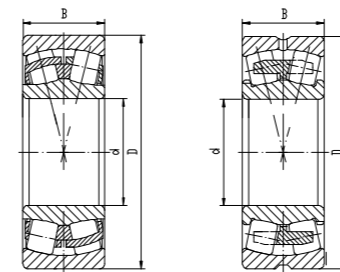
| Bearing Model | Boundary Dimension | | | | | Mounting Dimension | | | | | | Weight | WT |
|---------------|--------------------|------|-----|-----|------|--------------------|------|----|----|----|----|--------|-------|
| | d | D | H | Hi | Dpw | Pi | Pe | ni | fi | ne | fe | | |
| | mm | | | | | | | | | | | Kg | |
| FL-HYB1590FT | 1220 | 1870 | 352 | 340 | 1590 | 1360 | 1770 | 60 | 30 | 60 | 30 | 3760 | 2.0MW |



| Bearing Model | Boundary Dimension | | | | | Basic load rating | | Weight | WT |
|---------------|--------------------|------|-----|-----|-----|-------------------|-------|--------|-------|
| | d | D | B | T | C | Cr | Cor | | |
| | mm | | | | | KN | | Kg | |
| FL-3706/530 | 530 | 730 | 250 | 250 | 104 | 4600 | 13400 | 324 | 1.5MW |
| FL-3519/710X2 | 710 | 950 | 112 | 112 | 180 | 5000 | 14400 | 471 | 1.5MW |
| FL-3519/800X2 | 800 | 1060 | 130 | 130 | 216 | 6670 | 19600 | 664 | 1.5MW |
| FL-3506/1810 | 1810 | 2530 | 355 | 355 | 202 | 8260 | 35500 | 4804 | 3.0MW |
| FL-3506/2000 | 2000 | 2500 | 320 | 320 | 180 | 8020 | 34600 | 3130 | 3.0MW |
| FL-3506/2620 | 2620 | 3200 | 485 | 485 | 250 | 16460 | 65880 | 6720 | 6.0MW |



| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|---------------|--------------------|-----|----|-------------------|------|--------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-6305 | 25 | 62 | 17 | 22.4 | 11.5 | 0.214 | 1.5MW |
| FL-6012-2RS | 60 | 95 | 18 | 25.2 | 20.1 | 0.446 | 1.5MW |
| FL-6010 | 50 | 80 | 16 | 20.8 | 15.4 | 0.255 | 1.5MW |
| FL-6012 | 60 | 95 | 18 | 25.2 | 20.1 | 0.416 | 1.5MW |
| FL-6212-2RS | 60 | 110 | 22 | 47.8 | 33 | 0.8 | 1.5MW |
| FL-6215-2RS | 75 | 130 | 25 | 61 | 46 | 1.22 | 1.5MW |
| FL-6010 | 60 | 95 | 18 | 25.2 | 20.1 | 0.416 | 2.0MW |
| FL-6012/C3 | 60 | 95 | 18 | 25.2 | 20.1 | 0.416 | 2.0MW |
| FL-6213 | 60 | 95 | 18 | 25.2 | 20.1 | 0.416 | 2.0MW |
| FL-6016 | 80 | 125 | 22 | 42.6 | 35.5 | 0.845 | 3.0MW |

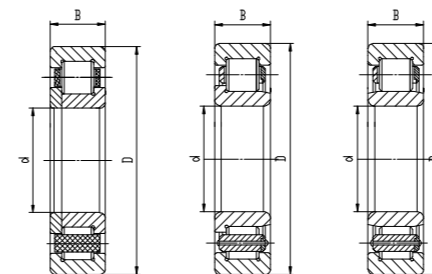


| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|----------------|--------------------|-----|----|-------------------|------|--------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-21315CA | 75 | 160 | 37 | 236 | 278 | 3.89 | 1.5MW |
| FL-22316CA | 80 | 170 | 58 | 399 | 500 | 6.54 | 1.5MW |
| FL-24126C/W33 | 130 | 210 | 80 | 580 | 980 | 10.5 | 1.5MW |
| FL-23030CA/W33 | 150 | 225 | 56 | 460 | 795 | 7.95 | 1.5MW |
| FL-23032CA/W33 | 160 | 240 | 60 | 585 | 880 | 9.9 | 1.5MW |
| FL-23034CA/W33 | 170 | 260 | 67 | 700 | 1140 | 13.9 | 1.5MW |
| FL-23032CA/W33 | 160 | 240 | 60 | 585 | 880 | 9.9 | 2.0MW |
| FL-22324CA/W33 | 120 | 260 | 86 | 850 | 1130 | 23.2 | 5.0MW |

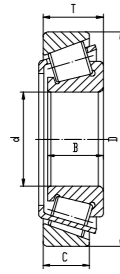


Actuator bearings

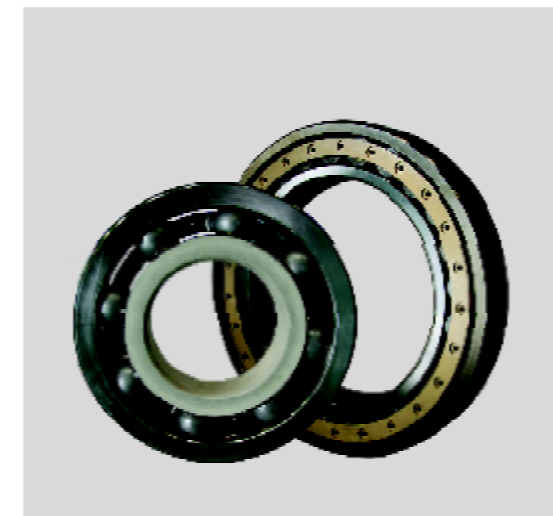
The characteristics of series of bearings for actuators gear are of low-speed and heavy-load, these bearings include spherical roller bearings, cylindrical roller bearings, four point contact ball bearings and tapered roller bearings, etc.



| Bearing Model | Boundary Dimension | | | Basic load rating | | Weight | WT |
|----------------|--------------------|-----|----|-------------------|------|--------|-------|
| | d | D | B | Cr | Cor | | |
| | mm | | | KN | | Kg | |
| FL-NUP203ETN1 | 17 | 40 | 12 | 17.4 | 14.4 | 0.0706 | 1.5MW |
| FL-NUP205ETN1 | 25 | 52 | 15 | 32 | 31 | 0.14 | 1.5MW |
| FL-NUP204ETN1 | 20 | 47 | 14 | 28.2 | 25.5 | 0.113 | 2.0MW |
| FL-NUP2206ETN1 | 30 | 62 | 20 | 52 | 54 | 0.263 | 2.0MW |
| FL-NJ2228M | 140 | 250 | 68 | 480 | 700 | 14.8 | 3.0MW |
| FL-NU2322EM | 110 | 240 | 80 | 684 | 897 | 18.6 | 5.0MW |
| FL-NJ2240EMA | 200 | 360 | 98 | 1240 | 1900 | 46.7 | 5.0MW |

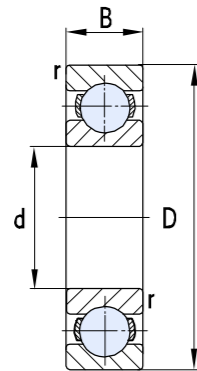


| Bearing Model | Boundary Dimension | | | | | Basic load rating | | Weight | WT |
|---------------|--------------------|-----|-----|-------|-----|-------------------|------|--------|-------|
| | d | D | B | T | C | Cr | Cor | | |
| | mm | | | | | KN | | Kg | |
| FL-32910 | 50 | 72 | 15 | 15 | 12 | 38 | 62 | 0.194 | 1.5MW |
| FL-32912 | 60 | 85 | 17 | 17 | 14 | 40 | 65 | 0.284 | 1.5MW |
| FL-30216 | 80 | 140 | 26 | 28.25 | 22 | 163 | 205 | 1.56 | 1.5MW |
| FL-30217 | 85 | 150 | 28 | 30.5 | 24 | 184 | 234 | 2.05 | 1.5MW |
| FL-32217 | 85 | 150 | 36 | 38.5 | 30 | 230 | 315 | 2.7 | 1.5MW |
| FL-33117 | 85 | 140 | 41 | 41 | 32 | 214 | 354 | 2.43 | 1.5MW |
| FL-32220 | 100 | 180 | 46 | 49 | 39 | 370 | 540 | 5.31 | 1.5MW |
| FL-33220 | 100 | 180 | 63 | 63 | 48 | 431 | 655 | 6.58 | 1.5MW |
| FL-T2EE100 | 100 | 165 | 46 | 47 | 39 | 310 | 480 | 3.8 | 1.5MW |
| FL-32221 | 105 | 190 | 50 | 53 | 43 | 395 | 572 | 6.26 | 1.5MW |
| FL-32024 | 120 | 180 | 38 | 38 | 29 | 237 | 395 | 3.27 | 1.5MW |
| FL-32026 | 130 | 200 | 45 | 45 | 34 | 340 | 580 | 5.06 | 1.5MW |
| FL-32028 | 140 | 210 | 45 | 45 | 34 | 330 | 580 | 5.41 | 1.5MW |
| FL-32228 | 140 | 250 | 68 | 71.75 | 58 | 670 | 1035 | 14.7 | 1.5MW |
| FL-32030 | 150 | 225 | 48 | 48 | 36 | 365 | 635 | 6.4 | 1.5MW |
| FL-33030 | 150 | 225 | 59 | 59 | 46 | 450 | 840 | 8.06 | 1.5MW |
| FL-32032 | 160 | 240 | 51 | 51 | 38 | 420 | 760 | 7.7 | 1.5MW |
| FL-32232 | 160 | 290 | 80 | 84 | 67 | 910 | 1450 | 23.7 | 1.5MW |
| FL-32232/YA8 | 160 | 290 | 80 | 84 | 67 | 880 | 1400 | 23.5 | 1.5MW |
| FL-32034 | 170 | 260 | 57 | 57 | 43 | 500 | 870 | 10.6 | 1.5MW |
| FL-32036 | 180 | 280 | 64 | 64 | 48 | 605 | 1060 | 13.9 | 1.5MW |
| FL-32240 | 200 | 360 | 98 | 104 | 82 | 1370 | 2170 | 42.6 | 1.5MW |
| FL-30217-QD | 85 | 150 | 28 | 30.5 | 24 | 184 | 234 | 2.05 | 2.0MW |
| FL-30218 | 90 | 160 | 30 | 32.5 | 26 | 222 | 291 | 2.73 | 2.0MW |
| FL-32219 | 95 | 170 | 43 | 45.5 | 37 | 298 | 415 | 4.34 | 2.0MW |
| FL-30319-QD | 95 | 200 | 45 | 49.5 | 38 | 380 | 468 | 6.91 | 2.0MW |
| FL-32020-QD | 100 | 150 | 32 | 32 | 24 | 172 | 280 | 1.87 | 2.0MW |
| FL-33124-QD | 120 | 200 | 62 | 62 | 48 | 440 | 770 | 7.74 | 2.0MW |
| FL-32030-QD | 150 | 225 | 48 | 48 | 36 | 365 | 635 | 6.4 | 2.0MW |
| FL-32032-QD | 160 | 240 | 51 | 51 | 38 | 420 | 760 | 7.7 | 2.0MW |
| FL-32034-QD | 170 | 260 | 57 | 57 | 43 | 500 | 870 | 10.6 | 2.0MW |
| FL-32036-QD | 180 | 280 | 64 | 64 | 48 | 605 | 1060 | 13.9 | 2.0MW |
| FL-32038-QD | 190 | 290 | 64 | 64 | 48 | 628 | 1121 | 14.5 | 2.0MW |
| FL-32222 | 110 | 200 | 53 | 56 | 46 | 445 | 655 | 7.4 | 3.0MW |
| FL-32224 | 120 | 215 | 58 | 61.5 | 50 | 495 | 750 | 9.25 | 3.0MW |
| FL-30228 | 140 | 250 | 42 | 45.75 | 36 | 428 | 578 | 8.8 | 3.0MW |
| FL-32234 | 170 | 310 | 86 | 91 | 71 | 1005 | 1615 | 30 | 3.0MW |
| FL-32236 | 180 | 320 | 86 | 91 | 71 | 1040 | 1700 | 30 | 3.0MW |
| FL-32238 | 190 | 340 | 92 | 97 | 75 | 1170 | 1890 | 36.1 | 3.0MW |
| FL-32248 | 240 | 440 | 120 | 127 | 100 | 1900 | 3200 | 81.4 | 3.0MW |
| FL-32226 | 130 | 230 | 64 | 67.75 | 54 | 572 | 880 | 11.5 | 6.0MW |
| FL-32036 | 180 | 280 | 64 | 64 | 48 | 605 | 1060 | 13.9 | 6.0MW |
| FL-32244 | 220 | 400 | 10 | 114 | 90 | 1600 | 2670 | 62.7 | 6.0MW |

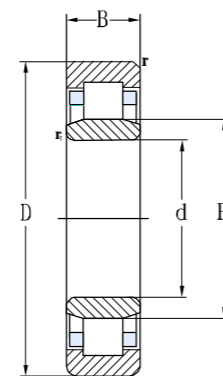
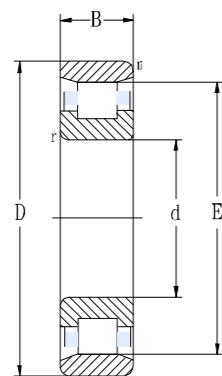


Bearing for Generators

The bearings for generators are required to own the characteristics of high speed, low vibration and good insulating property. These bearings are mostly deep groove ball bearings and cylindrical roller bearings.



| Bearing Model | Boundary Dimension | | | Basic load rating | | Speed ratings rpm | | Weight | WT |
|---------------|--------------------|-----|----|-------------------|-----|-------------------|------|--------|-------|
| | d | D | B | Cr | Cor | Grease | Oil | | |
| | mm | | | KN | | r/min | | Kg | |
| FL-6326/HQ1 | 130 | 280 | 58 | 240 | 226 | 2600 | 3200 | 13.5 | 1.5MW |
| FL-6328/HQ1 | 140 | 300 | 62 | 329 | 246 | 2400 | 3000 | 16.7 | 1.5MW |
| FL-6330/HQ1 | 150 | 320 | 65 | 360 | 280 | 2200 | 2800 | 18.3 | 1.5MW |



| Bearing Model | Boundary Dimension | | | Basic load rating | | Speed ratings rpm | | Weight | WT |
|-----------------|--------------------|-----|----|-------------------|-----|-------------------|------|--------|-------|
| | d | D | B | Cr | Cor | Grease | Oil | | |
| | mm | | | KN | | r/min | | Kg | |
| FL-IS-N317EM | 85 | 180 | 41 | 271 | 208 | 3000 | 3600 | 5.2 | 1.5MW |
| FL-IS-NU230M/C3 | 150 | 270 | 45 | 405 | 550 | 1900 | 2400 | 11.8 | 1.5MW |
| FL-IS-NU2230EM | 150 | 270 | 73 | 590 | 890 | 1900 | 2400 | 18.5 | 1.5MW |
| FL-IS-N234EM | 170 | 310 | 52 | 500 | 780 | 1800 | 2200 | 18.2 | 1.5MW |

