

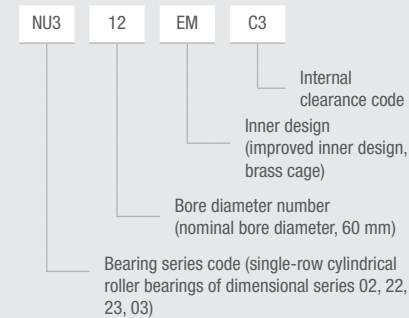
Cylindrical roller bearings



Cylindrical roller bearings exist in a wide range of designs, series and sizes. Mainly, we distinguish them by the number of roller rows and the inner/outer ring flanges as well as cage designs and materials.

Cylindrical roller bearings are suitable for applications dealing with heavy radial loads and medium to lower speeds. They offer high rigidity, low friction and help to reduce maintenance costs by providing long bearing service life. Having a separable inner or outer ring, they can easily be mounted. Standard cage material is steel sheet.

NOMENCLATURE:



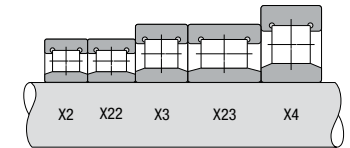
INTERNAL CLEARANCE CODE:

- C2 Less than standard clearance
- CN Normal clearance. No symbol. Standard if not otherwise indicated.
- C3 Greater than standard clearance
- C4 Greater clearance than C3

PREFIX/SUFFIX:

- M Machine solid brass cage
- TN polyamide cage
- E higher load capacity

CODEX BASIC TYPES & SERIES



Single Row types – X: N, NJ, NU and NUP

Bearings of NU design

have two integral flanges on the outer ring and a smooth inner ring. Within certain limits, an axial displacement of the shaft in relation to the housing can be accommodated in both directions.

Bearings of NJ design

have two integral flanges on the outer ring and one integral flange on the inner ring. Within certain limits, an axial displacement of the shaft in relation to the housing can be accommodated in one direction.

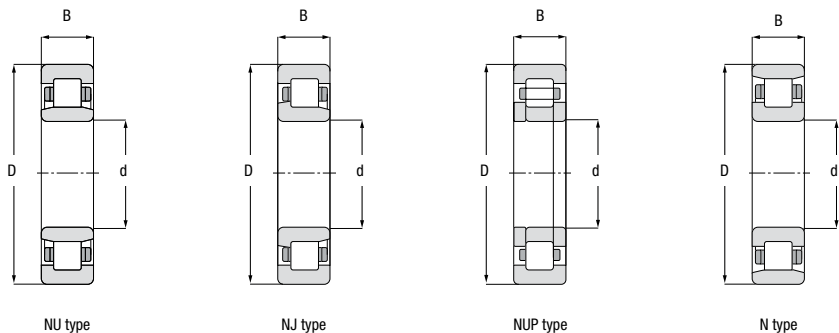
Bearings of NUP design

have two integral flanges on the outer ring and the inner ring with an integral flange and a support washer. These bearings can be used as locating bearings, guiding the shaft axially in both directions.

Bearings of N design

have two integral flanges on the inner ring and a smooth outer ring. Within certain limits, an axial displacement of the shaft in relation to the housing can be accommodated in both directions.

Cylindrical roller bearings



| Main dimensions (mm) | | | | Load rating (kN) | | Limiting speeds * (rpm) | Weight (kg) | Designation | Thrust collar |
|----------------------|----|----|------|------------------|-------------|-------------------------|-------------|-------------|---------------|
| d | D | B | B1** | Dynamic (C) | Static (C0) | | | | |
| 17 | 40 | 12 | - | 17 | 14 | 16830 | 0,066 | N 203 | |
| | 40 | 12 | - | 17 | 14 | 16830 | 0,07 | NJ 203 | |
| | 47 | 14 | - | 24 | 20 | 15300 | 0,12 | N 303 | |
| 20 | 47 | 14 | - | 25 | 22 | 14535 | 0,11 | N 204 | |
| | 47 | 14 | - | 25 | 22 | 14535 | 0,11 | NJ 204 | |
| | 47 | 14 | - | 25 | 22 | 14535 | 0,11 | NU 204 | |
| | 47 | 18 | - | 38,5 | 31 | 19200 | | N 2204 | |
| | 52 | 15 | - | 35 | 25 | 13700 | 0,15 | N 304 | |
| | 52 | 15 | 6,5 | 35 | 25 | 13700 | 0,17 | NJ 304 | HJ 304 |
| | 52 | 21 | - | 49,5 | 39 | 16800 | 0,22 | N 2304 | |
| 25 | 52 | 21 | - | 49,5 | 39 | 16800 | 0,22 | NUP 2304 | |
| | 52 | 15 | - | 28 | 26 | 12240 | 0,13 | N 205 | |
| | 52 | 15 | - | 28 | 26 | 12240 | 0,15 | NJ 205 | HJ 205 |
| | 52 | 15 | - | 28 | 26 | 12240 | 0,14 | NU 205 | HJ 205 |
| | 52 | 15 | - | 28 | 26 | 12240 | 0,14 | NUP 205 | - |
| 25 | 52 | 18 | - | 41,5 | 34,5 | 15600 | 0,16 | N 2205 | |
| | 52 | 18 | 6,5 | 33 | 33 | 12240 | 0,18 | NJ 2205 | HJ 2205 |
| | 52 | 18 | 6,5 | 33 | 33 | 12240 | 0,17 | NU 2205 | HJ 2205 |
| | 52 | 18 | 6,5 | 33 | 33 | 12240 | 0,17 | NUP 2205 | - |
| | 62 | 17 | - | 46 | 36 | 11475 | 0,24 | N 305 | - |
| | 62 | 17 | 7 | 46 | 36 | 11475 | 0,29 | NJ 305 | HJ 305 |
| | 62 | 17 | - | 46 | 36 | 11475 | 0,28 | NUP 305 | HJ 305 |
| | 62 | 24 | - | 67,5 | 56 | 13200 | 0,34 | N 2305 | - |
| | 62 | 24 | 8 | 63 | 54 | 11475 | 0,39 | NJ 2305 | HJ 2305 |
| | 62 | 24 | 8 | 63 | 54 | 11475 | 0,38 | NU 2305 | HJ 2305 |
| 62 | 24 | - | 63 | 54 | 11475 | 0,38 | NUP 2305 | - | |

| Main dimensions (mm) | | | | Load rating (kN) | | Limiting speeds * (rpm) | Weight (kg) | Designation | Thrust collar |
|----------------------|----|----|------|------------------|-------------|-------------------------|-------------|-------------|---------------|
| d | D | B | B1** | Dynamic (C) | Static (C0) | | | | |
| 30 | 62 | 16 | - | 43 | 36 | 10710 | 0,2 | N 206 | |
| | 62 | 16 | 7 | 43 | 36 | 10710 | 0,24 | NJ 206 | HJ 206 |
| | 62 | 16 | 7 | 43 | 36 | 10710 | 0,23 | NU 206 | HJ 206 |
| | 62 | 16 | - | 43 | 36 | 10710 | 0,22 | NUP 206 | - |
| | 62 | 20 | - | 58 | 50 | 13200 | | N 2206 | - |
| | 62 | 20 | - | 54 | 48 | 10710 | 0,27 | NJ 2206 | - |
| | 62 | 20 | - | 54 | 48 | 10710 | 0,26 | NU 2206 | - |
| | 62 | 20 | - | 54 | 48 | 10710 | 0,27 | NUP 2206 | - |
| | 72 | 19 | - | 57 | 47 | 9180 | 0,36 | N 306 | - |
| | 72 | 19 | 8,5 | 57 | 47 | 9180 | 0,41 | NJ 306 | HJ 306 |
| | 72 | 19 | 8,5 | 57 | 47 | 9180 | 0,4 | NU 306 | HJ 306 |
| | 72 | 19 | - | 57 | 47 | 9180 | 0,38 | NUP 306 | - |
| | 72 | 27 | - | 88 | 77,5 | 11600 | 0,53 | N 2306 | - |
| | 72 | 27 | - | 81 | 74 | 9180 | 0,54 | NJ 2306 | - |
| | 72 | 27 | - | 81 | 74 | 9180 | 0,53 | NU 2306 | - |
| 72 | 27 | - | 81 | 74 | 9180 | 0,55 | NUP 2306 | - | |
| 35 | 72 | 17 | - | 55 | 47 | 9180 | 0,3 | N 207 | |
| | 72 | 17 | 7 | 55 | 47 | 9180 | 0,31 | NJ 207 | HJ 207 |
| | 72 | 17 | 7 | 55 | 47 | 9180 | 0,3 | NU 207 | HJ 207 |
| | 72 | 17 | - | 55 | 47 | 9180 | 0,32 | NUP 207 | - |
| | 72 | 23 | - | 73 | 65,5 | 12000 | 0,4 | N 2207 | - |
| | 72 | 23 | - | 68 | 62 | 9180 | 0,41 | NJ 2207 | - |
| | 72 | 23 | - | 68 | 62 | 9180 | 0,4 | NU 2207 | - |
| | 72 | 23 | - | 68 | 62 | 9180 | 0,42 | NUP 2207 | - |
| | 80 | 21 | - | 74 | 62 | 8415 | 0,48 | N 307 | - |
| | 80 | 21 | 9,5 | 74 | 62 | 8415 | 0,55 | NJ 307 | HJ 307 |
| | 80 | 21 | 9,5 | 74 | 62 | 8415 | 0,46 | NU 307 | HJ 307 |
| | 80 | 21 | - | 74 | 62 | 8415 | 0,51 | NUP 307 | - |
| | 80 | 31 | - | 117 | 109 | 10200 | 0,74 | N 2307 | - |
| | 80 | 31 | - | 104 | 96 | 8415 | 0,73 | NJ 2307 | - |
| | 80 | 31 | - | 104 | 96 | 8415 | 0,72 | NU 2307 | - |
| 80 | 31 | - | 104 | 96 | 8415 | 0,75 | NUP 2307 | - | |
| 40 | 80 | 18 | - | 61 | 52 | 8415 | 0,37 | N 208 | - |
| | 80 | 18 | 8,5 | 61 | 52 | 8415 | 0,43 | NJ 208 | HJ 208 |
| | 80 | 18 | 8,5 | 61 | 52 | 8415 | 0,42 | NU 208 | HJ 208 |
| | 80 | 18 | - | 61 | 52 | 8415 | 0,4 | NUP 208 | - |
| | 80 | 23 | - | 65,5 | 62 | 10000 | 0,48 | N 2208 | - |
| | 80 | 23 | 9 | 80 | 74 | 8415 | 0,55 | NJ 2208 | HJ 2208 |
| | 80 | 23 | 9 | 80 | 74 | 8415 | 0,49 | NU 2208 | HJ 2208 |
| | 80 | 23 | - | 80 | 74 | 8415 | 0,56 | NUP 2208 | - |
| | 90 | 23 | - | 91 | 76 | 7268 | 0,64 | N 308 | - |
| | 90 | 23 | 11 | 91 | 76 | 7268 | 0,67 | NJ 308 | HJ 308 |
| | 90 | 23 | 11 | 91 | 76 | 7268 | 0,65 | NU 308 | HJ 308 |
| | 90 | 23 | - | 91 | 76 | 7268 | 0,68 | NUP 308 | - |

| Main dimensions (mm) | | | | Load rating (kN) | | Limiting speeds * (rpm) | Weight (kg) | Designation | Thrust collar |
|----------------------|-----|----|------|------------------|-------------|-------------------------|-------------|-------------|---------------|
| d | D | B | B1** | Dynamic (C) | Static (C0) | | | | |
| 40 | 90 | 33 | - | 91,5 | 88 | 8200 | 0,93 | N 2308 | - |
| | 90 | 33 | - | 126 | 118 | 7268 | 0,96 | NJ 2308 | - |
| | 90 | 33 | - | 126 | 118 | 7268 | 0,94 | NU 2308 | - |
| | 90 | 33 | - | 126 | 118 | 7268 | 0,98 | NUP 2308 | - |
| 45 | 85 | 19 | - | 68 | 63 | 7268 | 0,43 | N 209 | - |
| | 85 | 19 | 8,5 | 68 | 63 | 7268 | 0,49 | NJ 209 | HJ 209 |
| | 85 | 19 | 8,5 | 68 | 63 | 7268 | 0,48 | NU 209 | HJ 209 |
| | 85 | 19 | - | 68 | 63 | 7268 | 0,45 | NUP 209 | - |
| | 85 | 23 | - | 68 | 68 | 9000 | 0,52 | N 2209 | - |
| | 85 | 23 | - | 83 | 80 | 7268 | 0,54 | NJ 2209 | - |
| | 85 | 23 | - | 83 | 80 | 7268 | 0,52 | NU 2209 | - |
| | 85 | 23 | - | 83 | 80 | 7268 | 55 | NUP 2209 | - |
| | 100 | 25 | - | 110 | 98 | 6503 | 0,88 | N 309 | - |
| | 100 | 25 | 11,5 | 110 | 98 | 6503 | 1,05 | NJ 309 | HJ 309 |
| | 100 | 25 | 11,5 | 110 | 98 | 6503 | 1 | NU 309 | HJ 309 |
| | 100 | 25 | - | 110 | 98 | 6503 | 0,95 | NUP 309 | - |
| | 100 | 36 | - | 110 | 104 | 7400 | 1,24 | N 2309 | - |
| | 100 | 36 | - | 157 | 150 | 6503 | 1,35 | NJ 2309 | - |
| | 100 | 36 | - | 157 | 150 | 6503 | 1,3 | NU 2309 | - |
| | 100 | 36 | - | 157 | 150 | 6503 | 1,35 | NUP 2309 | - |
| 50 | 90 | 20 | - | 72 | 68 | 6885 | 0,48 | N 210 | - |
| | 90 | 20 | 9 | 72 | 68 | 6885 | 0,5 | NJ 210 | HJ 210 |
| | 90 | 20 | 9 | 72 | 68 | 6885 | 0,49 | NU 210 | HJ 210 |
| | 90 | 20 | - | 72 | 68 | 6885 | 0,51 | NUP 210 | - |
| | 90 | 23 | - | 71 | 73,5 | 8100 | 0,52 | N 2210 | - |
| | 90 | 23 | - | 88 | 86 | 6885 | 0,59 | NJ 2210 | - |
| | 90 | 23 | - | 88 | 86 | 6885 | 0,56 | NU 2210 | - |
| | 90 | 23 | - | 88 | 86 | 6885 | 0,59 | NUP 2210 | - |
| | 110 | 27 | - | 124 | 110 | 6120 | 1,15 | N 310 | - |
| | 110 | 27 | 13 | 124 | 110 | 6120 | 1,15 | NJ 310 | HJ 310 |
| | 110 | 27 | 13 | 124 | 110 | 6120 | 1,15 | NU 310 | HJ 310 |
| | 110 | 27 | - | 124 | 110 | 6120 | 1,2 | NUP 310 | - |
| | 110 | 40 | - | 134 | 131 | 6700 | 1,67 | N 2310 | - |
| | 110 | 40 | - | 182 | 182 | 6120 | 1,75 | NJ 2310 | - |
| 110 | 40 | - | 182 | 182 | 6120 | 1,7 | NU 2310 | - | |
| 110 | 40 | - | 182 | 182 | 6120 | 1,8 | NUP 2310 | - | |
| 55 | 100 | 21 | - | 112 | 116 | 6120 | 0,66 | N 211 | - |
| | 100 | 21 | - | 95 | 93 | 6120 | 0,66 | NJ 211 | HJ 211 |
| | 100 | 21 | 9,5 | 95 | 93 | 6120 | 0,67 | NU 211 | HJ 211 |
| | 100 | 21 | 9,5 | 95 | 93 | 6120 | 0,67 | NUP 211 | - |
| | 100 | 25 | - | 83,5 | 87 | 7400 | 0,76 | N 2211 | - |
| | 100 | 25 | - | 95 | 93 | 6120 | 0,80 | NJ 2211 | HJ 2211 |
| | 100 | 25 | 10 | 112 | 116 | 6120 | 0,81 | NU 2211 | HJ 2211 |
| | 100 | 25 | 10 | 112 | 116 | 6120 | 0,79 | NUP 2211 | - |

| Main dimensions (mm) | | | | Load rating (kN) | | Limiting speeds * (rpm) | Weight (kg) | Designation | Thrust collar |
|----------------------|-----|------|------|------------------|-------------|-------------------------|-------------|-------------|---------------|
| d | D | B | B1** | Dynamic (C) | Static (C0) | | | | |
| 60 | 120 | 29 | - | 153 | 140 | 5355 | 1,45 | N 311 | - |
| | 120 | 29 | 9 | 153 | 140 | 5355 | 1,5 | NJ 311 | HJ 311 |
| | 120 | 29 | 9 | 153 | 140 | 5355 | 1,45 | NU 311 | HJ 311 |
| | 120 | 29 | - | 153 | 140 | 5355 | 1,55 | NUP 311 | - |
| | 120 | 43 | - | 164 | 162 | 6100 | 2,13 | N 2311 | - |
| | 120 | 43 | 9 | 227 | 227 | 5355 | 2,3 | NJ 2311 | HJ 2311 |
| | 120 | 43 | 9 | 227 | 227 | 5355 | 2,25 | NU 2311 | HJ 2311 |
| | 120 | 43 | - | 227 | 227 | 5355 | 2,32 | NUP 2311 | - |
| | 110 | 22 | - | 106 | 100 | 5785 | 0,81 | N 212 | - |
| | 110 | 22 | 10 | 106 | 100 | 5783 | 0,83 | NJ 212 | HJ 212 |
| | 110 | 22 | 10 | 106 | 100 | 5783 | 0,81 | NU 212 | HJ 212 |
| | 110 | 22 | - | 106 | 100 | 5783 | 0,86 | NUP 212 | - |
| 65 | 110 | 28 | - | 107 | 116 | 6800 | 1,04 | N 2212 | - |
| | 110 | 28 | 10 | 143 | 150 | 5783 | 1,15 | NJ 2212 | HJ 2212 |
| | 110 | 28 | 10 | 143 | 150 | 5783 | 1,1 | NU 2212 | HJ 2212 |
| | 110 | 28 | - | 143 | 150 | 5783 | 1,15 | NUP 2212 | - |
| | 130 | 31 | - | 170 | 157 | 5126 | 1,8 | N 312 | - |
| | 130 | 31 | 14,5 | 170 | 157 | 5126 | 1,9 | NJ 312 | HJ 312 |
| | 130 | 31 | 14,5 | 170 | 157 | 5126 | 1,8 | NU 312 | HJ 312 |
| | 130 | 31 | - | 170 | 157 | 5126 | 1,95 | NUP 312 | - |
| | 130 | 46 | - | 187 | 188 | 5700 | 2,66 | N 2312 | - |
| | 130 | 46 | 16 | 255 | 260 | 5126 | 2,8 | NJ 2312 | HJ 2312 |
| | 130 | 46 | 16 | 255 | 260 | 5126 | 2,75 | NU 2312 | HJ 2312 |
| | 130 | 46 | - | 255 | 260 | 5126 | 2,85 | NUP 2312 | - |
| | 120 | 23 | - | 120 | 116 | 5126 | 1,05 | N 213 | - |
| | 120 | 23 | 10 | 120 | 116 | 5126 | 1,07 | NJ 213 | HJ 213 |
| 120 | 23 | 10 | 120 | 116 | 5126 | 1,05 | NU 213 | HJ 213 | |
| 120 | 23 | - | 120 | 116 | 5126 | 1,1 | NUP 213 | - | |
| 70 | 120 | 31 | - | 133 | 149 | 6300 | 1,37 | N 2213 | - |
| | 120 | 31 | 10,5 | 167 | 176 | 5126 | 1,45 | NJ 2213 | HJ 2213 |
| | 120 | 31 | - | 167 | 176 | 5126 | 1,5 | NUP 2213 | - |
| | 140 | 33 | - | 208 | 192 | 4590 | 2,25 | N 313 | - |
| | 140 | 33 | 15,5 | 208 | 192 | 4590 | 2,3 | NJ 313 | HJ 313 |
| | 140 | 33 | 15,5 | 208 | 192 | 4590 | 2,25 | NU 313 | HJ 313 |
| | 140 | 48 | - | 208 | 212 | 5200 | 3,2 | N 2313 | - |
| | 140 | 48 | 18 | 279 | 284 | 4590 | 3,35 | NJ 2313 | HJ 2313 |
| | 140 | 48 | - | 279 | 284 | 4590 | 3,45 | NUP 2313 | - |
| | 125 | 24 | - | 134 | 134 | 4820 | 1,15 | N 214 | - |
| | 125 | 24 | 11 | 134 | 134 | 4820 | 1,15 | NJ 214 | HJ 214 |
| | 125 | 24 | 11 | 134 | 134 | 4820 | 1,15 | NU 214 | HJ 214 |
| 125 | 24 | - | 134 | 134 | 4820 | 1,2 | NUP 214 | - | |
| 125 | 31 | - | 132 | 151 | 5900 | 1,44 | N 2214 | - | |
| 125 | 31 | 11,5 | 176 | 189 | 4820 | 1,55 | NJ 2214 | HJ 2214 | |
| 125 | 31 | - | 176 | 189 | 4820 | 1,55 | NUP 2214 | - | |

| Main dimensions (mm) | | | | Load rating (kN) | | Limiting speeds * (rpm) | Weight (kg) | Designation | Thrust collar |
|----------------------|-----|----|------|------------------|-------------|-------------------------|-------------|-------------|---------------|
| d | D | B | B1** | Dynamic (C) | Static (C0) | | | | |
| 70 | 150 | 35 | - | 231 | 223 | 4284 | 2,75 | N 314 | - |
| | 150 | 35 | 15,5 | 231 | | 4284 | 2,8 | NJ 314 | HJ 314 |
| | 150 | 35 | 15,5 | 231 | | 4284 | 2,75 | NU 314 | HJ 314 |
| | 150 | 51 | - | 247 | 262 | 4800 | 3,9 | N 2314 | - |
| | 150 | 51 | 18,5 | 309 | 319 | 4284 | 4 | NJ 2314 | HJ 2314 |
| 75 | 130 | 25 | - | 147 | 153 | 4590 | 1,25 | N 215 | - |
| | 130 | 25 | 11 | 147 | 153 | 4590 | 1,3 | NJ 215 | HJ 215 |
| | 130 | 25 | 11 | 147 | 153 | 4590 | 1,25 | NU 215 | HJ 215 |
| | 130 | 25 | - | 147 | 153 | 4590 | 1,3 | NUP 215 | - |
| | 130 | 31 | - | 144 | 162 | 5500 | 1,52 | N 2215 | - |
| | 130 | 31 | - | 182 | 204 | 4590 | 1,6 | NJ 2215 | - |
| | 160 | 37 | - | 274 | 260 | 4055 | 3,3 | N 315 | - |
| | 160 | 37 | 16,6 | 274 | 260 | 4055 | 3,3 | NU 315 | HJ 315 |
| | 160 | 55 | - | 286 | 300 | 4500 | 4,77 | N 2315 | - |
| | 160 | 55 | 19,5 | 372 | 392 | 4055 | 5 | NJ 2315 | HJ 2315 |
| 80 | 140 | 26 | - | 157 | 163 | 4284 | 1,5 | N 216 | - |
| | 140 | 26 | 12,5 | 157 | 163 | 4284 | 1,55 | NJ 216 | HJ 216 |
| | 140 | 26 | 12,5 | 157 | 163 | 4284 | 1,5 | NU 216 | HJ 216 |
| | 140 | 26 | 12,5 | 157 | 163 | 4284 | 1,6 | NUP 216 | - |
| | 140 | 33 | - | 163 | 189 | 5100 | 1,89 | N 2216 | - |
| | 140 | 33 | 12,5 | 208 | 240 | 4284 | 2,05 | NJ 2216 | H 2216 |
| | 170 | 39 | - | 294 | 284 | 3825 | 3,9 | N 316 | - |
| | 170 | 39 | 17 | 294 | 284 | 3825 | 3,95 | NU 316 | HJ 316 |
| | 170 | 58 | - | 305 | 330 | 4200 | 5,67 | N 2316 | - |
| | 170 | 58 | 20 | 407 | 431 | 3825 | 6 | NJ 2316 | HJ 2316 |
| 85 | 150 | 28 | - | 186 | 196 | 4055 | 1,9 | N 217 | - |
| | 150 | 28 | 12,5 | 186 | 196 | 4055 | 1,95 | NJ 217 | HJ 217 |
| | 150 | 36 | - | 188 | 218 | 4800 | 2,39 | N 2217 | - |
| | 180 | 41 | - | 333 | 328 | 3672 | 4,7 | N 317 | - |
| | 180 | 41 | 18,5 | 333 | 328 | 3672 | 4,7 | NU 317 | HJ 317 |
| | 180 | 60 | - | 350 | 380 | 4000 | 6,75 | N 2317 | - |
| 90 | 160 | 30 | - | 204 | 216 | 3825 | 2,35 | N 218 | - |
| | 160 | 40 | - | 219 | 248 | 4600 | 3,04 | N 2218 | - |
| | 190 | 43 | - | 358 | 353 | 3443 | 5,4 | N 318 | - |
| | 190 | 43 | 18,5 | 358 | 353 | 3443 | 5,45 | NU 318 | HJ 318 |
| | 190 | 43 | - | 350 | 355 | 3900 | - | N 2318 | - |

* For applications close to the limiting speeds please contact Codex QA department.

** With thrust collar.