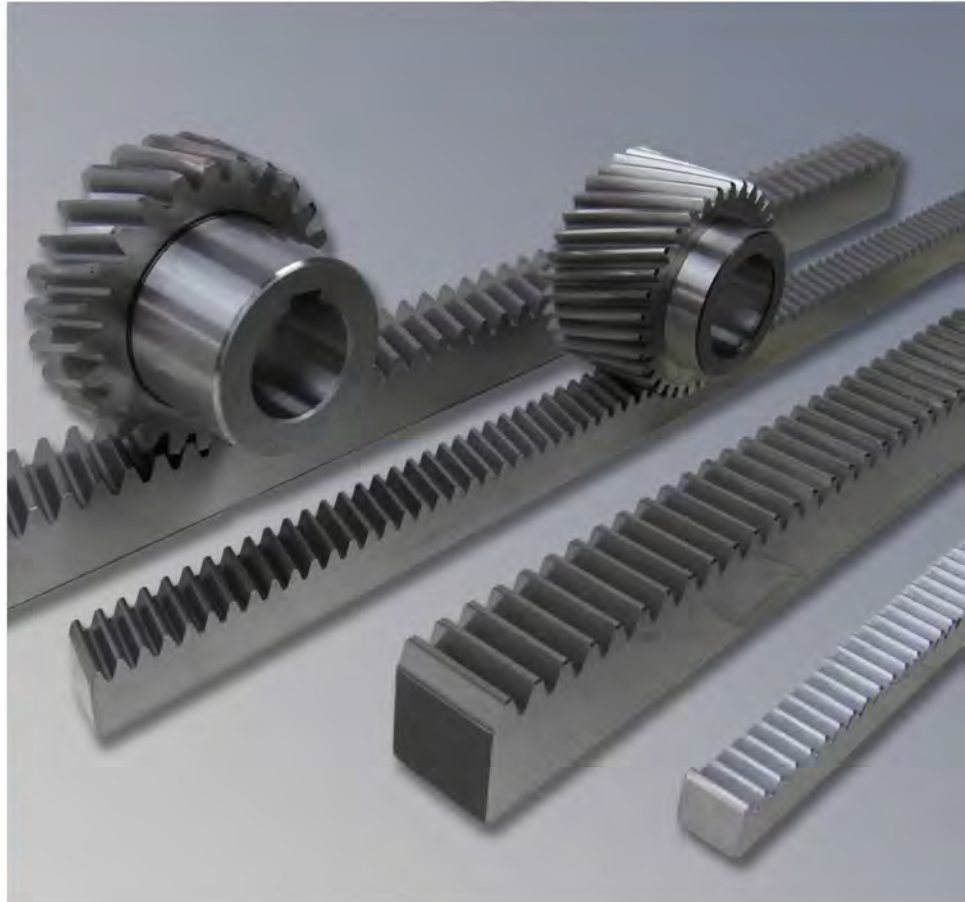




劲普机械
Jinpu Mechanical



杭州劲普传动机械有限公司

Hangzhou Jinpu Transmission Mechanical Co., Ltd

www.jpmach.com

中国·浙江
ZHEJIANG CHINA



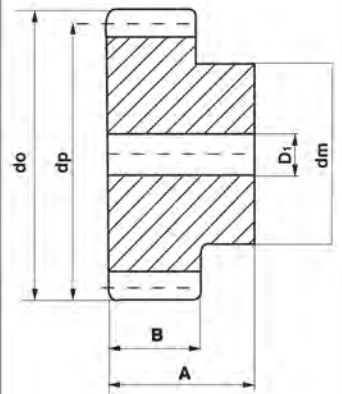
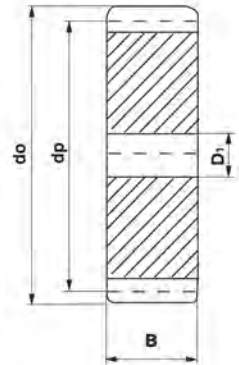
公司简介 COMPANY PROFILE

Jinpu, An Enterprise in Zhejiang China, is established over 10 years, 50~100 staff, and an area coverage of 5,000+ square meters for 2 manufacturing plants. Our business scope covers manufacturing Sprocket, Gear, Timing Belt Pulley, Taper Bush, Industrial Chain, mainly focus on non-standard machining parts base on customers' drawings.



| Z | Mod.3 | | | | Mod.4 | | | | Mod.5 | | | | Mod.6 | | | |
|-----|-------|-----|-----|----|-------|-----|----|----|-------|-----|-----|----|-------|-----|-----|----|
| | de | dp | dm | D1 | de | dp | dm | D1 | de | dp | dm | D1 | de | dp | dm | D1 |
| 12 | 42 | 36 | 27 | 12 | 56 | 48 | 35 | 14 | 70 | 60 | 45 | 20 | 84 | 72 | 54 | 20 |
| 13 | 45 | 39 | 30 | 12 | 60 | 52 | 40 | 14 | 75 | 65 | 50 | 20 | 90 | 78 | 60 | 20 |
| 14 | 48 | 42 | 33 | 12 | 64 | 56 | 45 | 14 | 80 | 70 | 55 | 20 | | | | |
| 15 | 51 | 45 | 35 | 12 | 68 | 60 | 45 | 14 | 85 | 75 | 60 | 20 | 102 | 90 | 70 | 20 |
| 16 | 54 | 48 | 38 | 14 | 72 | 64 | 50 | 16 | 90 | 80 | 65 | 20 | 108 | 96 | 75 | 20 |
| 17 | 57 | 51 | 42 | 14 | 76 | 68 | 50 | 16 | 95 | 85 | 70 | 20 | | | | |
| 18 | 60 | 54 | 45 | 14 | 80 | 72 | 50 | 16 | 100 | 90 | 70 | 20 | 120 | 108 | 80 | 20 |
| 19 | 63 | 57 | 45 | 14 | 84 | 76 | 60 | 16 | 105 | 95 | 70 | 20 | | | | |
| 20 | 66 | 60 | 45 | 14 | 88 | 80 | 60 | 16 | 110 | 100 | 80 | 20 | 132 | 120 | 90 | 20 |
| 21 | 69 | 63 | 45 | 16 | 92 | 84 | 70 | 16 | 115 | 105 | 80 | 20 | | | | |
| 22 | 72 | 66 | 50 | 16 | 96 | 88 | 70 | 16 | 120 | 110 | 80 | 20 | | | | |
| 23 | 75 | 69 | 50 | 16 | 100 | 92 | 75 | 20 | 125 | 115 | 90 | 20 | | | | |
| 24 | 78 | 72 | 50 | 16 | 104 | 96 | 75 | 20 | 130 | 120 | 90 | 20 | 156 | 144 | 110 | 25 |
| 25 | 81 | 75 | 60 | 16 | 108 | 100 | 75 | 20 | 135 | 125 | 90 | 20 | 162 | 150 | 110 | 25 |
| 26 | 84 | 78 | 60 | 16 | 112 | 104 | 75 | 20 | 140 | 130 | 100 | 20 | | | | |
| 27 | 87 | 81 | 60 | 16 | 116 | 108 | 75 | 20 | 145 | 135 | 100 | 20 | | | | |
| 28 | 90 | 84 | 60 | 16 | 120 | 112 | 75 | 20 | 150 | 140 | 100 | 25 | 180 | 168 | - | 25 |
| 29 | 93 | 87 | 60 | 16 | 124 | 116 | 75 | 20 | 155 | 145 | 110 | 25 | | | | |
| 30 | 96 | 90 | 60 | 16 | 128 | 120 | 75 | 20 | 160 | 150 | 110 | 25 | 192 | 180 | - | 25 |
| 31 | 99 | 93 | 60 | 16 | 132 | 124 | 80 | 20 | | | | | | | | |
| 32 | 102 | 96 | 70 | 16 | 136 | 128 | 80 | 20 | 170 | 160 | - | 25 | 204 | 192 | - | 25 |
| 33 | 105 | 99 | 70 | 16 | 140 | 132 | 80 | 20 | | | | | | | | |
| 34 | 108 | 102 | 70 | 16 | 144 | 136 | 80 | 20 | | | | | | | | |
| 35 | 111 | 105 | 70 | 16 | 148 | 140 | 80 | 20 | 185 | 175 | - | 25 | 222 | 210 | - | 25 |
| 36 | 114 | 108 | 70 | 20 | 152 | 144 | 80 | 25 | | | | | | | | |
| 37 | 117 | 111 | 70 | 20 | | | | | | | | | | | | |
| 38 | 120 | 114 | 80 | 20 | 160 | 152 | - | 25 | 200 | 190 | - | 25 | 240 | 220 | - | 25 |
| 39 | 123 | 117 | 80 | 20 | | | | | | | | | | | | |
| 40 | 126 | 120 | 80 | 20 | 168 | 160 | - | 25 | 210 | 200 | - | 25 | 252 | 240 | - | 25 |
| 41 | 129 | 138 | 90 | 20 | | | | | | | | | | | | |
| 42 | 132 | 126 | 80 | 20 | | | | | | | | | | | | |
| 43 | 135 | 129 | 80 | 20 | | | | | | | | | | | | |
| 44 | 138 | 132 | 90 | 20 | | | | | | | | | | | | |
| 45 | 141 | 135 | 90 | 20 | 188 | 180 | - | 25 | 235 | 225 | - | 25 | | | | |
| 46 | 144 | 138 | 90 | 20 | | | | | | | | | | | | |
| 47 | 147 | 141 | 100 | 20 | | | | | | | | | | | | |
| 48 | 150 | 144 | 100 | 20 | 200 | 192 | - | 25 | 250 | 240 | - | 25 | | | | |
| 50 | 156 | 150 | - | 20 | 208 | 200 | - | 25 | 260 | 250 | - | 30 | | | | |
| 52 | 162 | 156 | - | 20 | 216 | 208 | - | 25 | 270 | 260 | - | 30 | | | | |
| 55 | 171 | 165 | - | 20 | 228 | 220 | - | 25 | 285 | 275 | - | 30 | | | | |
| 57 | 177 | 171 | - | 20 | 236 | 228 | - | 25 | 295 | 285 | - | 30 | | | | |
| 60 | 186 | 180 | - | 20 | 248 | 240 | - | 25 | 310 | 300 | - | 30 | | | | |
| 65 | 201 | 195 | - | 20 | 268 | 260 | - | 25 | 335 | 325 | - | 30 | | | | |
| 70 | 216 | 210 | - | 25 | 288 | 280 | - | 25 | 360 | 350 | - | 30 | | | | |
| 72 | 222 | 216 | - | 25 | | | | | | | | | | | | |
| 75 | 231 | 225 | - | 25 | 308 | 300 | - | 25 | 385 | 375 | - | 30 | | | | |
| 76 | 234 | 228 | - | 25 | 312 | 304 | - | 30 | 390 | 380 | - | 30 | | | | |
| 80 | 246 | 240 | - | 25 | 328 | 320 | - | 30 | 410 | 400 | - | 30 | | | | |
| 85 | 261 | 255 | - | 25 | 348 | 340 | - | 30 | 435 | 425 | - | 30 | | | | |
| 90 | 276 | 270 | - | 25 | 368 | 360 | - | 30 | 460 | 450 | - | 30 | | | | |
| 95 | 291 | 285 | - | 25 | 388 | 380 | - | 30 | 485 | 475 | - | 30 | | | | |
| 100 | 306 | 300 | - | 25 | 408 | 400 | - | 30 | 510 | 500 | - | 30 | | | | |
| 110 | 336 | 330 | - | 25 | 448 | 440 | - | 30 | 560 | 550 | - | 30 | | | | |
| 114 | 348 | 342 | - | 30 | 464 | 456 | - | 30 | 580 | 570 | - | 30 | | | | |
| 120 | 366 | 360 | - | 30 | | | | | | | | | | | | |
| 127 | 387 | 381 | - | 30 | | | | | | | | | | | | |

Standard Spur Gear
Pressure Angle 20°

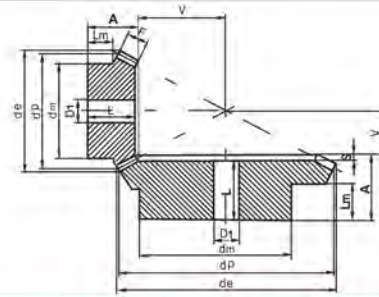


Total Thickness 《A》

- Modulo 1 =25mm.
- Modulo 1.5 =30mm.
- Modulo 2 =35mm.
- Modulo 2.5 =45mm.
- Modulo 3 =50mm.
- Modulo 4 =60mm.
- Modulo 5 =75mm.
- Modulo 6 =80mm.

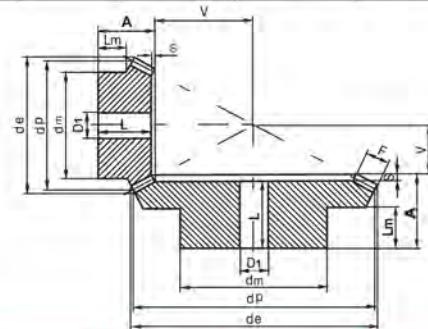
Tooth Width 《B》

- Modulo 1 =15mm.
- Modulo 1.5 =17mm.
- Modulo 2 =20mm.
- Modulo 2.5 =25mm.
- Modulo 3 =30mm.
- Modulo 4 =40mm.
- Modulo 5 =50mm.
- Modulo 6 =60mm.

Bevel gear pairs with Usual Axes
 Pressure angle 20°


TYPE-A Ratio-1 : 1

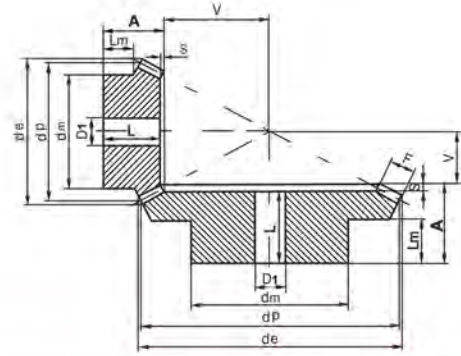
| M | Z | d_p | d_e | F | A | d_m | D_1 | L | V | S | L_m |
|-----|----|-------|--------|------|------|-------|-------|------|-------|-----|-------|
| 1.5 | 16 | 24.0 | 26.12 | 6 | 18.9 | 20.3 | 8 | | 7.10 | | 12 |
| | 20 | 30.0 | 32.12 | 10 | 20 | 22 | 10 | 18 | 7.40 | 2 | 8.5 |
| | 25 | 37.5 | 39.62 | 10 | 23 | 28 | 10 | 21 | 11.09 | 2 | 12 |
| | 30 | 45.0 | 47.12 | 12 | 25 | 30 | 12 | 22.5 | 13.35 | 2.5 | 12 |
| 2 | 16 | 32.0 | 34.83 | 8 | 23.5 | 25.3 | 8 | | 9.50 | | 14 |
| | 20 | 40.0 | 42.83 | 12 | 25 | 32 | 10 | 22 | 10.78 | 3 | 12 |
| | 25 | 50.0 | 52.82 | 14 | 28 | 40 | 12 | 25 | 14.28 | 3 | 12.3 |
| | 30 | 60.0 | 62.83 | 16 | 30 | 50 | 12 | 27 | 17.78 | 3 | 12.8 |
| 2.5 | 16 | 40.0 | 43.53 | 10 | 28.1 | 30.3 | 12 | | 11.90 | | 15 |
| | 20 | 50.0 | 53.53 | 12 | 30.5 | 40 | 12 | 27 | 15.43 | 3.5 | 16 |
| | 25 | 62.5 | 66.00 | 15 | 33.5 | 50 | 15 | 30 | 19.48 | 3.5 | 16 |
| | 30 | 75.0 | 78.53 | 18 | 35.5 | 55 | 15 | 32 | 23.63 | 3.5 | 16 |
| 3 | 16 | 48.0 | 52.25 | 12 | 31.7 | 40.3 | 12 | | 14.30 | | 18 |
| | 20 | 60.0 | 64.24 | 18 | 35 | 45 | 15 | 31 | 16.00 | 4 | 13.6 |
| | 25 | 75.0 | 79.24 | 20 | 38 | 55 | 15 | 34 | 22.00 | 4 | 16 |
| | 30 | 90.0 | 94.24 | 22 | 40 | 60 | 20 | 36 | 28.00 | 4 | 17 |
| 3.5 | 16 | 56.0 | 60.95 | 14 | 36.4 | 45.3 | 16 | | 16.60 | | 20 |
| | 20 | 70.0 | 74.95 | 22 | 40.5 | 55 | 15 | 36 | 18.13 | 4.5 | 17 |
| | 25 | 87.5 | 92.45 | 26 | 43.5 | 65 | 20 | 39 | 23.97 | 4.5 | 18 |
| | 30 | 105.0 | 109.95 | 30 | 48 | 70 | 20 | 43.5 | 30.02 | 4.5 | 19 |
| 4 | 16 | 64.0 | 69.65 | 15 | 44.3 | 50.3 | 16 | | 19.70 | | 25 |
| | 20 | 80.0 | 85.65 | 25 | 43 | 60 | 18 | 38 | 20.74 | 5 | 18 |
| | 25 | 100.0 | 105.65 | 28 | 45 | 70 | 20 | 40 | 28.50 | 5 | 18 |
| | 30 | 120.0 | 125.65 | 32 | 48 | 80 | 20 | 43 | 35.67 | 5 | 16 |
| 4.5 | 16 | 72.0 | 78.38 | 17.5 | 46.3 | 55.3 | 20 | | 21.70 | | 25 |
| | 20 | 90.0 | 96.38 | 28 | 48 | 65 | 20 | 42 | 23.41 | 6 | 18 |
| | 25 | 112.5 | 118.80 | 32 | 50 | 75 | 20 | 44 | 31.76 | 6 | 18 |
| | 30 | 135.0 | 141.38 | 35 | 53 | 90 | 20 | 47 | 40.82 | 6 | 17 |

Bevel gear pairs with Usual Axes
 Pressure angle 20°


TYPE-A Ratio-1 : 2

| M | Z | d_p | d_e | F | A | d_m | D_1 | L | V | S | L_m |
|-----|----|-------|--------|----|------|-------|-------|----|-------|-----|-------|
| 1.5 | 16 | 24 | 26.68 | 8 | 19.5 | 21 | 10 | 18 | 16.33 | 1.5 | 11.3 |
| | 32 | 48 | 49.34 | 8 | 20.0 | 32 | 12 | 17 | 7.45 | 3 | 10 |
| 2 | 16 | 32 | 35.57 | 10 | 23.0 | 26 | 10 | 21 | 22.41 | 2 | 11.9 |
| | 32 | 64 | 65.78 | 10 | 25.0 | 40 | 12 | 21 | 10.21 | 4 | 10 |
| 2.5 | 16 | 40 | 44.47 | 12 | 27.5 | 34 | 12 | 25 | 28.38 | 2.5 | 14.4 |
| | 32 | 80 | 82.23 | 12 | 25.0 | 50 | 15 | 20 | 12.97 | 5 | 10 |
| 3 | 16 | 48 | 53.36 | 15 | 28.0 | 40 | 15 | 25 | 33.64 | 3 | 11.6 |
| | 32 | 96 | 98.68 | 15 | 30.0 | 60 | 15 | 24 | 15.31 | 6 | 10 |
| 3.5 | 16 | 56 | 62.26 | 18 | 33.5 | 48 | 15 | 30 | 38.83 | 3.5 | 14.4 |
| | 32 | 112 | 115.12 | 18 | 31.0 | 70 | 20 | 24 | 17.77 | 7 | 10 |
| 4 | 16 | 64 | 71.15 | 20 | 36.0 | 50 | 15 | 32 | 44.81 | 4 | 13.4 |
| | 32 | 128 | 131.57 | 20 | 32.0 | 80 | 20 | 24 | 20.42 | 8 | 10 |
| 4.5 | 16 | 72 | 80.05 | 22 | 39.5 | 60 | 20 | 35 | 51.00 | 4.5 | 15.4 |
| | 32 | 144 | 148.00 | 22 | 36.0 | 90 | 20 | 27 | 23.21 | 9 | 10 |

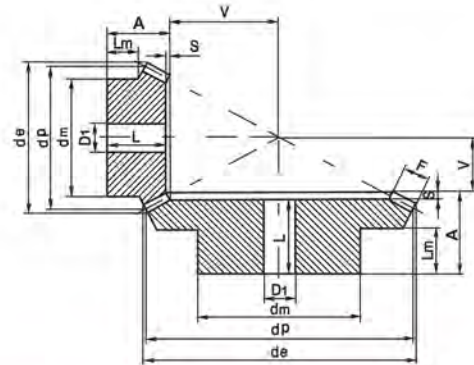
Bevel gear pairs with Usual Axes
Pressure angle 20°



TYPE-A Ratio-1 : 3

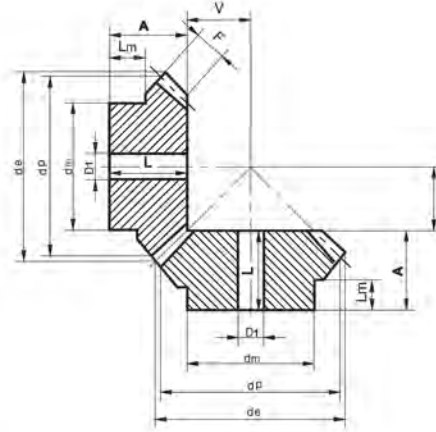
| M | Z | db | de | F | A | dm | D1 | L | V | S | Lm |
|-----|----|-----|--------|----|------|-----|----|------|-------|-----|------|
| 1.5 | 16 | 24 | 26.82 | 12 | 24 | 20 | 10 | 23 | 24.42 | 1 | 11.7 |
| | 48 | 72 | 72.95 | 12 | 20 | 50 | 12 | 17 | 7.27 | 3 | 10 |
| 2 | 16 | 32 | 35.80 | 15 | 28.5 | 26 | 12 | 27 | 33.26 | 1.5 | 12.4 |
| | 48 | 96 | 97.26 | 15 | 23 | 60 | 15 | 19 | 9.90 | 4 | 10 |
| 2.5 | 16 | 40 | 44.74 | 18 | 32 | 32 | 12 | 30 | 42.41 | 1.5 | 13 |
| | 48 | 120 | 121.58 | 18 | 26 | 70 | 20 | 21 | 12.60 | 5 | 10 |
| 3 | 16 | 48 | 53.69 | 18 | 32 | 40 | 15 | 30 | 54.25 | 2 | 12.1 |
| | 48 | 144 | 145.90 | 18 | 29 | 80 | 20 | 23 | 16.20 | 6 | 10 |
| 3.5 | 16 | 56 | 62.64 | 22 | 38 | 48 | 15 | 35.5 | 62.29 | 2.5 | 15 |
| | 48 | 168 | 170.21 | 22 | 31 | 90 | 20 | 24 | 18.48 | 7 | 10 |
| 4 | 16 | 64 | 71.59 | 25 | 41.5 | 55 | 20 | 38.5 | 71.23 | 3 | 15.2 |
| | 48 | 192 | 194.53 | 25 | 33 | 100 | 20 | 25 | 21.20 | 8 | 10 |
| 4.5 | 16 | 72 | 80.53 | 28 | 53 | 60 | 20 | 50 | 80.27 | 3 | 23.4 |
| | 48 | 216 | 218.84 | 28 | 49 | 100 | 20 | 40 | 23.93 | 9 | 18 |
| 5 | 16 | 80 | 89.48 | 35 | 60 | 60 | 20 | 57 | 85.61 | 3 | 22.5 |
| | 48 | 240 | 243.16 | 35 | 50 | 150 | 20 | 40 | 25.45 | 10 | 20 |

Bevel gear pairs with Usual Axes
Pressure angle 20°



TYPE-A Ratio-1 : 4

| M | Z | db | de | F | A | dm | D1 | L | V | S | Lm |
|-----|----|-----|--------|----|------|-----|----|------|--------|-----|------|
| 1.5 | 16 | 24 | 26.91 | 12 | 25 | 18 | 10 | 24 | 36.02 | 1 | 12.2 |
| | 64 | 96 | 96.73 | 12 | 22 | 70 | 15 | 19 | 8.53 | 3 | 10 |
| 2 | 16 | 32 | 35.88 | 15 | 24 | 25 | 12 | 23 | 49.07 | 1 | 8.2 |
| | 64 | 128 | 128.97 | 15 | 24 | 80 | 20 | 20 | 11.79 | 4 | 10 |
| 2.5 | 16 | 40 | 44.85 | 18 | 30.5 | 30 | 12 | 29 | 61.99 | 1.5 | 11.7 |
| | 64 | 160 | 161.21 | 18 | 29 | 90 | 20 | 24 | 13.77 | 5 | 10 |
| 3 | 16 | 48 | 53.82 | 22 | 34 | 40 | 15 | 32 | 74.05 | 2 | 11 |
| | 64 | 192 | 193.45 | 22 | 30 | 100 | 20 | 24 | 16.41 | 6 | 10 |
| 3.5 | 16 | 56 | 62.80 | 25 | 45 | 48 | 15 | 43 | 87.13 | 2 | 19.1 |
| | 64 | 224 | 225.70 | 25 | 50 | 100 | 20 | 43 | 19.32 | 7 | 22 |
| 4 | 16 | 64 | 71.76 | 30 | 50 | 50 | 20 | 48 | 98.21 | 2 | 18.5 |
| | 64 | 256 | 257.94 | 30 | 50 | 120 | 20 | 42 | 21.72 | 8 | 20 |
| 4.5 | 16 | 72 | 80.73 | 32 | 53 | 55 | 20 | 50.5 | 112.08 | 2.5 | 19 |
| | 64 | 288 | 290.18 | 32 | 53 | 130 | 20 | 44 | 24.83 | 9 | 23 |
| 5 | 16 | 80 | 89.70 | 35 | 58 | 60 | 20 | 55.5 | 125.0 | 2.5 | 20.6 |
| | 64 | 320 | 322.42 | 35 | 58 | 150 | 20 | 48 | 27.65 | 10 | 25 |

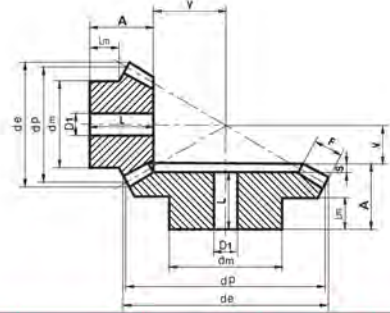
Bevel gear pairs with Usual Axes
 Pressure angle 20°


TYPE-B Ratio-1:1

| M | Z | d_p | d_e | F | A | d_m | D_1 | V | L_m |
|-----|----|-------|-------|------|-------|-------|-------|-------|-------|
| 1 | 16 | 16.0 | 17.4 | 4 | 11.2 | 13.3 | 4 | 4.80 | 6.5 |
| | 19 | 19.0 | 20.4 | 4 | 11.8 | 15.3 | 4 | 6.20 | 6.5 |
| | 22 | 22.0 | 23.4 | 4.7 | 12.8 | 16.3 | 5 | 7.20 | 6.5 |
| | 26 | 26.0 | 27.4 | 5.5 | 13.3 | 20.3 | 5 | 8.70 | 7 |
| | 30 | 30.0 | 31.4 | 6.4 | 16 | 20.3 | 5 | 10.00 | 8 |
| 1.5 | 16 | 24.0 | 26.1 | 6 | 18.9 | 20.3 | 8 | 7.10 | 12 |
| | 19 | 28.5 | 30.6 | 7 | 21.3 | 20.3 | 8 | 8.70 | 12 |
| | 22 | 33.0 | 35.1 | 7.5 | 22.5 | 25.3 | 8 | 10.50 | 12 |
| | 26 | 39.0 | 41.1 | 8.5 | 23.2 | 28.3 | 8 | 12.80 | 12 |
| | 30 | 45.0 | 47.1 | 10 | 27.2 | 30.3 | 12 | 14.80 | 12 |
| 2 | 16 | 32.0 | 34.8 | 8 | 23.5 | 25.3 | 8 | 9.50 | 14 |
| | 19 | 38.0 | 40.8 | 9 | 24.2 | 25.3 | 8 | 11.80 | 12 |
| | 22 | 44.0 | 46.8 | 10 | 27.9 | 30.3 | 12 | 14.10 | 14 |
| | 26 | 52.0 | 54.8 | 12 | 31.4 | 35.3 | 12 | 16.60 | 14 |
| | 30 | 60.0 | 62.8 | 13 | 34.1 | 40.3 | 14 | 19.90 | 17 |
| 2.5 | 16 | 40.0 | 43.5 | 10 | 28.1 | 30.3 | 12 | 11.90 | 15 |
| | 19 | 47.5 | 51.0 | 11 | 27.1 | 35.3 | 12 | 14.90 | 13 |
| | 22 | 55.0 | 58.5 | 12 | 30.1 | 45.3 | 16 | 17.90 | 16 |
| | 26 | 65.0 | 68.5 | 15 | 33.2 | 45.3 | 16 | 20.80 | 16 |
| | 30 | 75.0 | 78.5 | 16 | 39 | 50.3 | 16 | 25.00 | 20 |
| 3 | 16 | 48.0 | 52.5 | 12 | 31.7 | 40.3 | 12 | 14.30 | 18 |
| | 19 | 57.0 | 61.2 | 13 | 36 | 40.3 | 14 | 18.00 | 17 |
| | 22 | 66.0 | 70.2 | 15 | 36.9 | 50.3 | 16 | 21.10 | 17 |
| | 26 | 78.0 | 82.2 | 17 | 38.4 | 50.3 | 16 | 25.60 | 18 |
| | 30 | 90.0 | 94.2 | 19 | 43.8 | 60.3 | 20 | 30.20 | 22 |
| 3.5 | 16 | 56.0 | 60.9 | 14 | 36.4 | 45.3 | 16 | 16.60 | 20 |
| | 19 | 66.5 | 71.5 | 15 | 37.8 | 50.3 | 18 | 21.00 | 19 |
| | 22 | 77.0 | 81.9 | 17 | 39.1 | 55.3 | 20 | 24.90 | 18 |
| | 26 | 91.0 | 96.0 | 20 | 43.35 | 62.3 | 20 | 29.70 | 20 |
| | 30 | 105.0 | 110.0 | 23 | 47.1 | 70.3 | 20 | 34.90 | 22 |
| 4 | 16 | 64.0 | 69.7 | 15 | 44.3 | 50.3 | 16 | 19.70 | 25 |
| | 19 | 76.0 | 81.7 | 18 | 44.4 | 55.3 | 20 | 23.60 | 22 |
| | 22 | 88.0 | 93.7 | 20 | 45.9 | 60.3 | 20 | 28.10 | 22 |
| | 26 | 104.0 | 109.7 | 25 | 48 | 70.3 | 20 | 34.00 | 22 |
| | 30 | 120.0 | 125.7 | 26 | 54.2 | 80.3 | 20 | 39.80 | 25 |
| 4.5 | 16 | 72.0 | 78.4 | 17.5 | 46.3 | 55.3 | 20 | 21.70 | 25 |
| | 19 | 85.5 | 91.8 | 20 | 49 | 62.3 | 20 | 26.57 | 25 |
| | 22 | 99.0 | 105.3 | 22 | 50.1 | 70.3 | 20 | 31.90 | 25 |
| | 26 | 117.0 | 123.0 | 25 | 54.7 | 75.3 | 20 | 38.60 | 26 |
| | 30 | 135.0 | 141.4 | 29 | 60 | 80.3 | 20 | 45.00 | 28 |
| 5 | 16 | 80.0 | 87.1 | 18 | 48.9 | 60.3 | 20 | 25.10 | 25 |
| | 19 | 95.0 | 102.1 | 22 | 52.2 | 60.3 | 20 | 29.80 | 25 |
| | 22 | 110.0 | 117.1 | 24 | 58.2 | 80.3 | 20 | 35.80 | 30 |
| | 26 | 130.0 | 137.1 | 29 | 62.7 | 80.3 | 20 | 42.30 | 30 |
| | 30 | 150.0 | 157.1 | 32 | 68.9 | 80.3 | 20 | 50.10 | 35 |

Bevel gear pairs with Usual Axes

Pressure angle 20°

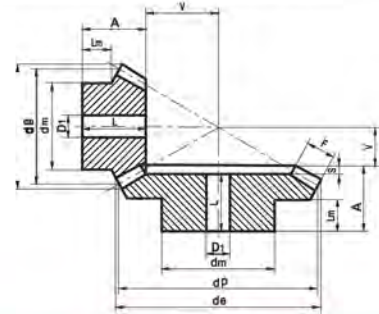


TYPE-B Ratio-1:1.5

| M | Z | d _p | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|------|------|----------------|----------------|------|------|-----|----------------|
| 1 | 16 | 16 | 18.1 | 4.3 | 12 | 13.3 | 4 | 13.3 | 8 | 1.5 | 7 |
| | 24 | 24 | 24.8 | 4.3 | 14.8 | 20.3 | 5 | | | | |
| 1.5 | 16 | 24 | 27.1 | 8 | 20.3 | 20.3 | 8 | 22.7 | 10.7 | 2.2 | 11.8 |
| | 24 | 36 | 37.2 | 8 | 24.9 | 28.3 | 8 | | | | |
| 2 | 16 | 32 | 36.2 | 10 | 25.2 | 25.3 | 8 | 24.7 | 14.8 | 2.5 | 13.8 |
| | 24 | 48 | 49.7 | 10 | 27.2 | 32.3 | 8 | | | | |
| 2.5 | 16 | 40 | 45.2 | 13 | 30.8 | 32.3 | 12 | 30.8 | 18.2 | 3.2 | 16.4 |
| | 24 | 60 | 62.1 | 13 | 34 | 45.3 | 14 | | | | |
| 3 | 16 | 48 | 54.3 | 14.5 | 32.4 | 40.3 | 12 | 32 | 22.6 | 4.2 | 16.4 |
| | 24 | 72 | 74.5 | 14.5 | 36.2 | 55.3 | 16 | | | | |
| 3.5 | 16 | 56 | 63.3 | 18 | 40.4 | 45.3 | 16 | 40 | 25.6 | 4.2 | 20.4 |
| | 24 | 84 | 86.9 | 18 | 44.2 | 55.3 | 20 | | | | |
| 4 | 16 | 64 | 72.4 | 18 | 46.8 | 50.3 | 16 | 40 | 31.2 | 5.5 | 25.4 |
| | 24 | 96 | 99.3 | 18 | 45.5 | 60.3 | 20 | | | | |
| 4.5 | 16 | 72 | 81.4 | 20 | 47.6 | 60.3 | 20 | 51.3 | 35.4 | 6.5 | 25.1 |
| | 24 | 108 | 111.7 | 20 | 57.8 | 80.3 | 20 | | | | |
| 5 | 16 | 80 | 90.5 | 24 | 54.1 | 60.3 | 20 | 54.5 | 37.9 | 6.6 | 25.4 |
| | 24 | 120 | 124.1 | 24 | 61.1 | 80.3 | 20 | | | | |

Bevel gear pairs with Usual Axes

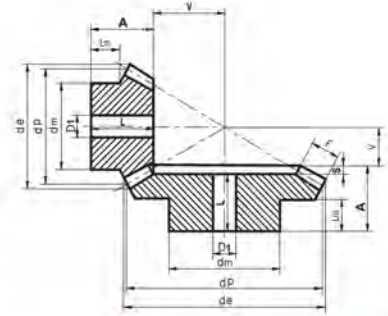
Pressure angle 20°



TYPE-B Ratio-1:2

| M | Z | d _p | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|------|------|----------------|----------------|------|------|-----|----------------|
| 1 | 15 | 15.0 | 17.4 | 5 | 11.9 | 13.3 | 4 | 13.7 | 10.1 | 1.4 | 6.5 |
| | 30 | 30.0 | 30.6 | 5 | 15.1 | 20.3 | 5 | | | | |
| 1.5 | 15 | 22.5 | 26.1 | 9 | 21.1 | 19.3 | 8 | 23 | 13.9 | 2.2 | 11.9 |
| | 30 | 45.0 | 45.9 | 9 | 25.2 | 32.3 | 8 | | | | |
| 2 | 15 | 30.0 | 34.8 | 11.5 | 26 | 25.3 | 8 | 26.8 | 19.0 | 3 | 14.1 |
| | 30 | 60.0 | 61.2 | 11.5 | 29.8 | 40.3 | 14 | | | | |
| 2.5 | 15 | 37.5 | 43.5 | 15 | 31.8 | 32.3 | 12 | 30 | 23.2 | 3.7 | 16.2 |
| | 30 | 75.0 | 76.5 | 15 | 33.7 | 45.3 | 16 | | | | |
| 3 | 15 | 45.0 | 52.2 | 17 | 37.3 | 40.3 | 12 | 38 | 28.7 | 4.1 | 19.9 |
| | 30 | 90.0 | 91.8 | 17 | 42.1 | 55.3 | 16 | | | | |
| 3.5 | 15 | 52.5 | 60.9 | 20.5 | 46.1 | 45.3 | 16 | 40 | 32.9 | 5 | 24.7 |
| | 30 | 105.0 | 107.1 | 20.5 | 45 | 60.3 | 20 | | | | |
| 4 | 15 | 60.0 | 69.6 | 22.5 | 48.6 | 50.3 | 20 | 51.9 | 38.4 | 5.4 | 24.6 |
| | 30 | 120.0 | 122.3 | 22.5 | 57.3 | 80.3 | 20 | | | | |
| 4.5 | 15 | 67.5 | 78.3 | 26 | 51.4 | 60.3 | 20 | 54.3 | 42.6 | 6 | 24.7 |
| | 30 | 135.0 | 137.6 | 26 | 60.3 | 80.3 | 20 | | | | |
| 5 | 15 | 75.0 | 87 | 30 | 57.6 | 60.3 | 20 | 56 | 46.4 | 6.5 | 25.3 |
| | 30 | 150.0 | 152.9 | 30 | 62.5 | 80.3 | 20 | | | | |

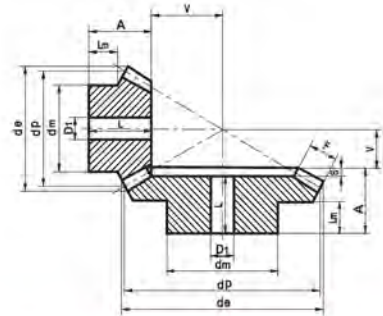
Bevel gear pairs with Usual Axes
Pressure angle 20°



TYPE-B Ratio-1 : 2.5

| M | Z | d _b | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|------|------|----------------|----------------|------|------|-----|----------------|
| 1 | 16 | 16 | 18.6 | 6.5 | 14.4 | 13.3 | 4 | 13 | 13.6 | 1.8 | 7.4 |
| | 40 | 40 | 40.4 | 6.5 | 14.8 | 25.3 | 8 | | 5.2 | | |
| 1.5 | 16 | 24 | 27.9 | 11.5 | 24.2 | 20.3 | 8 | 25.5 | 18.8 | 2.3 | 12.3 |
| | 40 | 60 | 60.7 | 11.5 | 27.8 | 40.3 | 14 | | 7.2 | | |
| 2 | 16 | 32 | 37.2 | 15 | 29.6 | 25.3 | 8 | 29 | 25.4 | 3.4 | 13.7 |
| | 40 | 80 | 80.9 | 15 | 32.4 | 45.3 | 16 | | 9.6 | | |
| 2.5 | 16 | 40 | 46.4 | 19 | 38.4 | 32.3 | 12 | 35.9 | 31.6 | 3.9 | 18.5 |
| | 40 | 100 | 101.1 | 19 | 39.8 | 55.3 | 16 | | 12.2 | | |
| 3 | 16 | 48 | 55.7 | 21.5 | 41.9 | 40.3 | 16 | 44 | 39.1 | 3.9 | 19.6 |
| | 40 | 120 | 121.4 | 21.5 | 47.9 | 60.3 | 20 | | 15.1 | | |
| 3.5 | 16 | 56 | 65.0 | 22.6 | 49.1 | 45.3 | 20 | 50 | 47.9 | 4.6 | 25 |
| | 40 | 140 | 141.6 | 22.6 | 54.6 | 80.3 | 20 | | 18.4 | | |
| 4 | 16 | 64 | 74.3 | 26 | 52.5 | 55.3 | 20 | 50.5 | 54.5 | 6.5 | 25.3 |
| | 40 | 170 | 161.8 | 26 | 57.0 | 80.3 | 20 | | 21.0 | | |
| 4.5 | 16 | 72 | 83.6 | 30 | 56.3 | 60.3 | 20 | 53 | 60.7 | 6.7 | 24.6 |
| | 40 | 180 | 182.1 | 30 | 59.7 | 80.3 | 20 | | 23.3 | | |
| 5 | 16 | 80 | 92.9 | 32 | 65.4 | 60.3 | 20 | 58.3 | 68.6 | 7.4 | 30.1 |
| | 40 | 200 | 202.3 | 32 | 65.7 | 90.3 | 20 | | 26.3 | | |

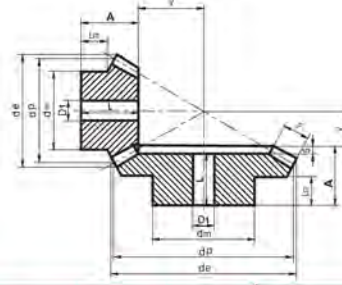
Bevel gear pairs with Usual Axes
Pressure angle 20°



TYPE-B Ratio-1 : 3

| M | Z | d _b | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|------|------|----------------|----------------|------|------|-----|----------------|
| 1 | 15 | 15 | 17.7 | 7.1 | 16.6 | 13.3 | 4 | 15.2 | 15.4 | 1.9 | 9.2 |
| | 45 | 45 | 45.3 | 7.1 | 17.1 | 25.3 | 8 | | 4.9 | | |
| 1.5 | 15 | 22.5 | 26.5 | 10.5 | 22.6 | 19.3 | 8 | 27.2 | 23.4 | 2.4 | 11.7 |
| | 45 | 67.5 | 68.1 | 10.5 | 29.6 | 45.3 | 14 | | 7.4 | | |
| 2 | 15 | 30 | 35.4 | 14 | 28.9 | 25.3 | 8 | 28.4 | 31.1 | 3.7 | 14.2 |
| | 45 | 90 | 90.8 | 14 | 32.1 | 45.3 | 16 | | 9.9 | | |
| 2.5 | 15 | 37.5 | 44.2 | 18 | 34.6 | 32.3 | 12 | 35.3 | 38.4 | 4.4 | 15.9 |
| | 45 | 112.5 | 113.4 | 18 | 39.7 | 60.3 | 20 | | 12.3 | | |
| 3 | 15 | 45 | 53.0 | 21 | 41.3 | 40.3 | 16 | 42 | 46.7 | 5.2 | 19.7 |
| | 45 | 135 | 136.1 | 21 | 47.2 | 60.3 | 20 | | 14.8 | | |
| 3.5 | 15 | 52.5 | 61.9 | 23.5 | 49.6 | 45.3 | 20 | 48.6 | 55.4 | 5.8 | 25 |
| | 45 | 157.5 | 158.8 | 23.5 | 54.4 | 80.3 | 20 | | 17.6 | | |
| 4 | 15 | 60 | 70.7 | 27.5 | 54.3 | 50.3 | 20 | 50.5 | 62.7 | 6.5 | 25.4 |
| | 45 | 180 | 181.5 | 27.5 | 57 | 80.3 | 20 | | 20 | | |
| 4.5 | 15 | 67.5 | 79.5 | 28.5 | 55.2 | 55.3 | 20 | 57 | 72.8 | 6.9 | 24.8 |
| | 45 | 202.5 | 204.2 | 28.5 | 63.9 | 90.3 | 20 | | 23.1 | | |
| 5 | 15 | 75 | 88.4 | 33 | 65.3 | 60.3 | 20 | 59.2 | 79.7 | 7.5 | 30 |
| | 45 | 225 | 226.9 | 33 | 66.7 | 90.3 | 20 | | 25.3 | | |

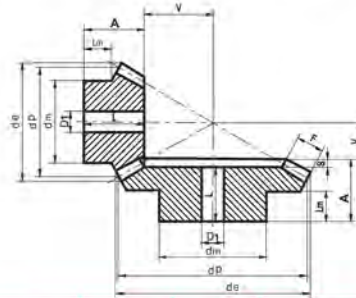
Bevel gear pairs with Usual Axes
Pressure angle 20°



TYPE-B Ratio-1 : 3.5

| M | Z | d _p | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|-----|------|----------------|----------------|------|------|-----|----------------|
| 1 | 16 | 16 | 18.7 | 8.7 | 16.6 | 13.3 | 4 | 14.2 | 19.4 | 2.5 | 7.6 |
| | 56 | 56 | 56.3 | 8.7 | 16.7 | 30.3 | 8 | | 5.3 | | 10 |
| 1.5 | 16 | 24 | 28.1 | 12 | 24 | 20.3 | 8 | 32 | 30 | 2.8 | 11.5 |
| | 56 | 84 | 84.5 | 12 | 34.8 | 45.3 | 14 | | 8.2 | | 25 |
| 2 | 16 | 32 | 37.5 | 16 | 30.9 | 25.3 | 8 | 33.3 | 40.1 | 3.8 | 14.1 |
| | 56 | 112 | 112.6 | 16 | 37.1 | 55.3 | 16 | | 10.9 | | 25 |
| 2.5 | 16 | 40 | 46.8 | 20 | 38.9 | 32.3 | 14 | 40 | 50.1 | 4.4 | 17.9 |
| | 56 | 140 | 140.8 | 20 | 44.4 | 60.3 | 20 | | 13.6 | | 30 |
| 3 | 16 | 48 | 56.2 | 24 | 49.9 | 40.3 | 16 | 47.5 | 60.1 | 5.2 | 24.9 |
| | 56 | 168 | 169 | 24 | 52.7 | 80.3 | 20 | | 16.3 | | 35 |
| 3.5 | 16 | 56 | 65.6 | 25 | 52 | 25.5 | 20 | 49.1 | 73 | 6 | 25.5 |
| | 56 | 196 | 197.1 | 25 | 55.1 | 80.3 | 20 | | 19.9 | | 35 |

Bevel gear pairs with Usual Axes
Pressure angle 20°



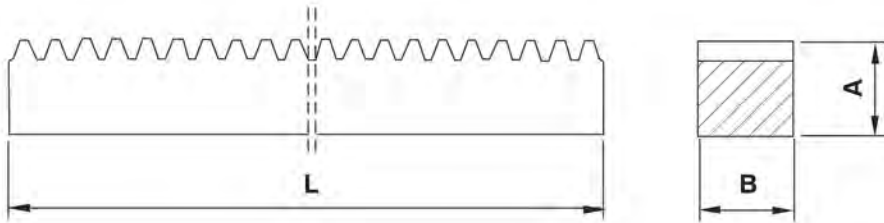
TYPE-B Ratio-1 : 4

| M | Z | d _p | d _e | F | A | d _m | D ₁ | L | V | S | L _m |
|-----|----|----------------|----------------|-----|------|----------------|----------------|------|-------|-----|----------------|
| 1 | 15 | 15.0 | 17.80 | 9.3 | 17.2 | 13.3 | 4 | 15.2 | 20.8 | 1.9 | 7.7 |
| | 60 | 60 | 60.30 | 9.3 | 17.1 | 30.3 | 8 | | 4.9 | | 10 |
| 1.5 | 15 | 22.5 | 26.70 | 11 | 23 | 20.3 | 8 | 31.2 | 34.0 | 2.8 | 11.7 |
| | 60 | 90 | 90.40 | 11 | 34 | 50.3 | 16 | | 8.0 | | 25 |
| 2 | 15 | 30 | 35.60 | 16 | 31 | 25.3 | 8 | 34.2 | 44.0 | 3.4 | 14.4 |
| | 60 | 120 | 120.60 | 16 | 37.6 | 60.3 | 16 | | 10.4 | | 25 |
| 2.5 | 15 | 37.5 | 44.50 | 19 | 38.1 | 32.3 | 14 | 40 | 55.9 | 4.8 | 18.4 |
| | 60 | 150 | 150.70 | 19 | 44.8 | 60.3 | 20 | | 13.2 | | 30 |
| 3 | 15 | 45 | 53.30 | 23 | 48.1 | 40.3 | 16 | 48.2 | 66.9 | 5 | 24.5 |
| | 60 | 180.0 | 180.80 | 23 | 53.2 | 80.3 | 20 | | 15.8 | | 35 |
| 3.5 | 15 | 52.5 | 62.20 | 26 | 52.1 | 45.3 | 20 | 54.4 | 78.9 | 6 | 25.1 |
| | 60 | 210 | 211.00 | 26 | 60.4 | 90.3 | 20 | | 18.6 | | 40 |
| 4 | 15 | 60 | 71.10 | 30 | 55.1 | 50.3 | 20 | 53 | 89.9 | 7.8 | 23 |
| | 60 | 240 | 241.10 | 30 | 60.8 | 90.3 | 20 | | 21.2 | | 40 |
| 4.5 | 15 | 67.5 | 79.97 | 32 | 57 | 52.3 | 20 | 53.5 | 102.9 | 8.5 | 23 |
| | 60 | 270 | 271.24 | 32 | 62 | 90.3 | 20 | | 24.3 | | 40 |
| 5 | 15 | 75 | 88.80 | 34 | 62 | 55.3 | 20 | 55 | 115.7 | 10 | 25 |
| | 60 | 300.0 | 301.30 | 34 | 65 | 90.3 | 20 | | 27.0 | | 40 |

Special Note

The racks are according to the characters of high precision:

- With the whole length of 2000mm,unstraight degree can not exceed within 0.20mm,no matter the measurement is taken at any place of the rack.
- Unverticality of each vetical plane of the rack is less than 0.20mm.
- Smooth finished of each side is 0.8 and over.
- Error added up to circumferential pitch of any teeth is less than 0.20mm.



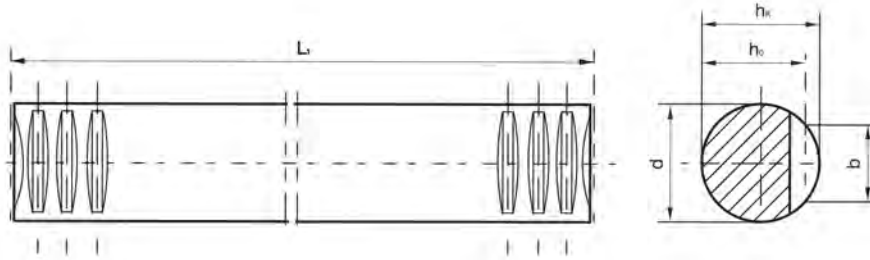
$\alpha=20^\circ$

C45

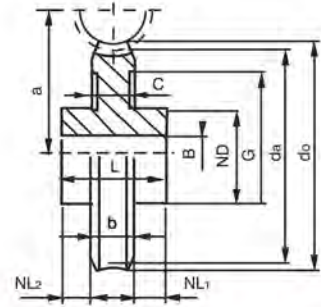
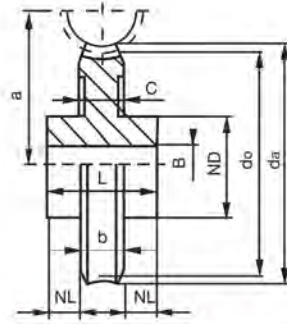
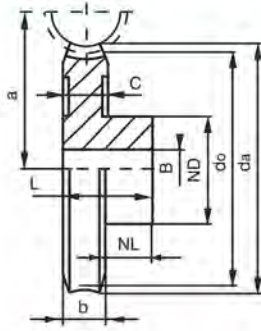
| Mod | L=250 | L=500 | L=1000 | L=2000 |
|-----|-------|-------|--------|--------|
| | AXB | AXB | AXB | AXB |
| 1 | 15X15 | 15X15 | 15X15 | 15X15 |
| 1.5 | 17X17 | 17X17 | 17X17 | 17X17 |
| 2 | 20X20 | 20X20 | 20X20 | 20X20 |
| 2.5 | 25X25 | 25X25 | 25X25 | 25X25 |
| 3 | 30X30 | 30X30 | 30X30 | 30X30 |
| 4 | - | - | 22X22 | 22X22 |
| 4 | - | - | 25X25 | 25X25 |
| 4 | - | 30X30 | 30X30 | 30X30 |
| 4 | 40X40 | 40X40 | 40X40 | 40X40 |
| 5 | 50X50 | 50X50 | 50X50 | 50X50 |
| 6 | - | 60X60 | 60X60 | 60X60 |
| 8 | - | - | 80X80 | 80X80 |

special notice

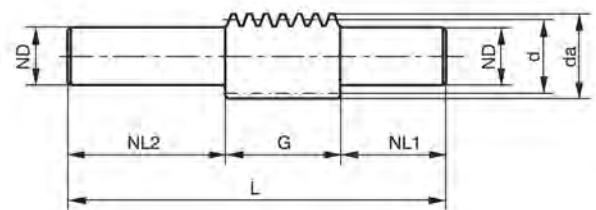
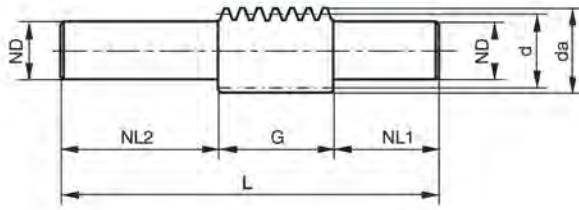
Material C 45 of specially treated bright steel $\text{Ø} d_{h11}$ with a tensile strength of approx. 650 N/mm². Both ends of the racks are designed so that several racks can be linked together to obtain any desired length.



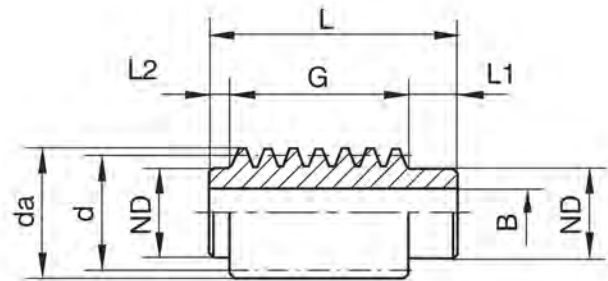
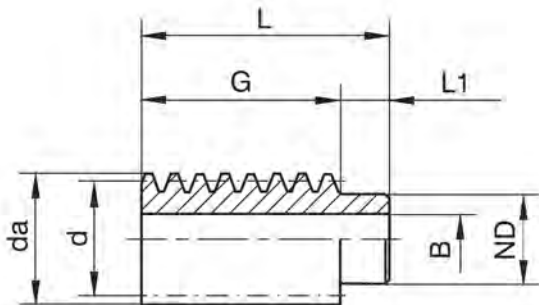
| Module | L_1 | $\text{Ø} d_{h11}$ | b | hk | ho | kg |
|--------|--------|--------------------|------|----|------|-------|
| 1 | 251.3 | 15 | 7.5 | 15 | 14.0 | 0.34 |
| | 499.5 | 15 | 7.5 | 15 | 14.0 | 0.66 |
| | 999.0 | 15 | 7.5 | 15 | 14.0 | 1.35 |
| 1.5 | 249.8 | 17 | 9.6 | 17 | 15.5 | 0.42 |
| | 499.5 | 17 | 9.6 | 17 | 15.5 | 0.84 |
| | 999.0 | 17 | 9.6 | 17 | 15.5 | 1.70 |
| 2 | 251.3 | 20 | 12.0 | 20 | 18.0 | 0.55 |
| | 502.7 | 20 | 12.0 | 20 | 18.0 | 1.10 |
| | 999.0 | 20 | 12.0 | 20 | 18.0 | 2.20 |
| 2.5 | 251.3 | 25 | 15.0 | 25 | 22.5 | 0.90 |
| | 502.7 | 25 | 15.0 | 25 | 22.5 | 1.80 |
| | 997.5 | 25 | 15.0 | 25 | 22.5 | 3.60 |
| 3 | 254.5 | 30 | 18.0 | 30 | 27.0 | 1.30 |
| | 499.5 | 30 | 18.0 | 30 | 27.0 | 2.50 |
| | 999.0 | 30 | 18.0 | 30 | 27.0 | 5.10 |
| 4 | 251.3 | 40 | 24.0 | 40 | 36.0 | 2.30 |
| | 502.6 | 40 | 24.0 | 40 | 36.0 | 4.50 |
| | 1005.3 | 40 | 24.0 | 40 | 36.0 | 9.10 |
| 5 | 251.3 | 50 | 30.0 | 50 | 45.0 | 3.80 |
| | 502.6 | 50 | 30.0 | 50 | 45.0 | 7.10 |
| | 1005.3 | 50 | 30.0 | 50 | 45.0 | 14.30 |



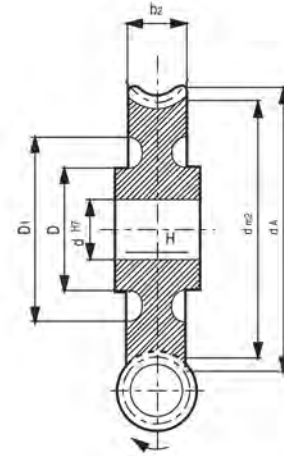
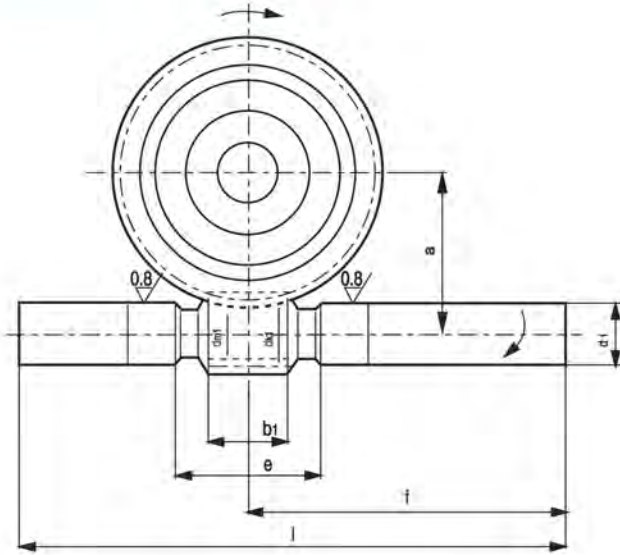
| Module | Z | Ttpe | | dp | da | ND | N N1/N2 | L | G | C | a | BH7 | Kg |
|--------|-----|------|-------|-------|-------|------|------------|------|-----|-------|-------|-------|-------|
| 1.0 | 16 | 1 | 16:1 | 16 | 18.8 | 12 | 8 | 14.5 | - | - | 15 | 5 | 0.02 |
| | 18 | 1 | 18:1 | 18 | 20.8 | 12 | 8 | 14.5 | - | - | 16 | 5 | 0.02 |
| | 20 | 1 | 20:1 | 20 | 22.8 | 16 | 8 | 14.5 | - | - | 17 | 5 | 0.03 |
| | 25 | 1 | 25:1 | 25 | 27.8 | 16 | 8 | 14.5 | - | - | 19.5 | 5 | 0.04 |
| | 35 | 1 | 35:1 | 35 | 37.8 | 16 | 10 | 16.5 | - | - | 24.5 | 6 | 0.07 |
| | 50 | 1 | 50:1 | 50 | 52.8 | 20 | 10 | 16.5 | - | - | 32 | 6 | 0.14 |
| | 75 | 1 | 75:1 | 75 | 77.8 | 30 | 10 | 16.5 | - | 4.5 | 44.5 | 6 | 0.20 |
| | 100 | 1 | 100:1 | 100 | 102.8 | 30 | 12 | 18.5 | - | 1.5 | 57 | 6 | 0.48 |
| b=6.5 | 125 | 1 | 125:1 | 125 | 127.8 | 40 | 12 | 18.5 | - | 4.5 | 69.5 | 8 | 0.58 |
| | 150 | 1 | 150:1 | 150 | 152.8 | 40 | 12 | 18.5 | - | 4.5 | 82 | 8 | 0.59 |
| | 16 | 2 | 16:1 | 24 | 28.4 | 18 | 6 | 24 | - | - | 24.5 | 8 | 0.06 |
| 1.5 | 18 | 2 | 18:1 | 27 | 31.7 | 20 | 8 | 28 | - | - | 26 | 8 | 0.08 |
| | 20 | 2 | 20:1 | 30 | 34.7 | 25 | 8 | 28 | - | - | 27.5 | 10 | 0.13 |
| | 30 | 2 | 30:1 | 45 | 49.7 | 30 | 8 | 28 | - | - | 35 | 10 | 0.26 |
| | 40 | 2 | 40:1 | 60 | 64.7 | 30 | 10 | 32 | - | - | 42.5 | 10 | 0.40 |
| | 50 | 2 | 50:1 | 75 | 79.7 | 30 | 10 | 32 | - | 10 | 50 | 10 | 0.44 |
| | 75 | 2 | 75:1 | 112.5 | 117.2 | 40 | 10 | 32 | - | 10 | 68.75 | 12 | 0.86 |
| | 100 | 2 | 100:1 | 150 | 154.7 | 45 | 10 | 32 | - | 10 | 87.5 | 12 | 1.30 |
| b=12 | 16 | 2 | 16:1 | 32 | 37.6 | 20 | 8 | 30 | - | - | 32 | 8 | 0.14 |
| | 18 | 2 | 18:1 | 36 | 41.6 | 25 | 8 | 30 | - | - | 34 | 10 | 0.25 |
| | 20 | 2 | 20:1 | 40 | 45.6 | 30 | 10 | 34 | - | - | 36 | 12 | 0.55 |
| | 30 | 2 | 30:1 | 60 | 65.6 | 40 | 10 | 34 | - | - | 46 | 12 | 0.60 |
| | 40 | 2 | 40:1 | 80 | 85.6 | 40 | 10 | 34 | - | 11 | 56 | 12 | 0.65 |
| | 50 | 2 | 50:1 | 100 | 105.6 | 40 | 10 | 34 | - | 11 | 66 | 12 | 0.76 |
| | 60 | 2 | 60:1 | 120 | 125.6 | 50 | 10 | 34 | - | 11 | 126 | 12 | 1.20 |
| 2.0 | 16 | 3 | 16:1 | 48 | 57 | 40 | 18/4 | 46 | - | - | 43 | 15 | 0.46 |
| | 18 | 3 | 18:1 | 54 | 63 | 40 | 18/14 | 46 | - | - | 46 | 15 | 0.55 |
| | 20 | 3 | 20:1 | 60 | 69 | 40 | 18/14 | 46 | - | - | 49 | 15 | 0.64 |
| | 26 | 3 | 26:1 | 78 | 87 | 45 | 18/14 | 46 | 60 | 12 | 58 | 18 | 1.20 |
| | 32 | 3 | 32:1 | 96 | 105 | 50 | 18/14 | 46 | 70 | 12 | 67 | 20 | 1.40 |
| | 40 | 3 | 40:1 | 120 | 129 | 65 | 18/14 | 46 | 90 | 12 | 79 | 25 | 2.20 |
| | 52 | 3 | 52:1 | 147 | 156 | 75 | 23/4 | 51 | 110 | 12 | 97 | 30 | 3.40 |
| 65 | 3 | 65:1 | 195 | 204 | 85 | 23/4 | 51 | 150 | 12 | 116.5 | 35 | 4.90 | |
| b=14 | 16 | 3 | 16:1 | 64 | 76 | 50 | 21/5 | 60 | - | - | 57 | 20 | 1.00 |
| | 18 | 3 | 18:1 | 72 | 84 | 50 | 21/5 | 60 | - | - | 67 | 20 | 1.50 |
| | 20 | 3 | 20:1 | 80 | 92 | 50 | 21/5 | 60 | - | - | 65 | 20 | 1.60 |
| | 26 | 3 | 26:1 | 104 | 116 | 55 | 21/5 | 60 | 80 | 14 | 77 | 22 | 2.10 |
| | 32 | 3 | 32:1 | 128 | 140 | 65 | 21/5 | 60 | 90 | 14 | 89 | 25 | 3.40 |
| | 40 | 3 | 40:1 | 160 | 172 | 75 | 21/5 | 60 | 125 | 14 | 105 | 30 | 4.50 |
| | 52 | 3 | 52:1 | 208 | 220 | 85 | 26/5 | 65 | 175 | 14 | 129 | 35 | 6.70 |
| 65 | 3 | 65:1 | 260 | 272 | 100 | 26/5 | 65 | 225 | 14 | 155 | 40 | 9.50 | |
| 4.0 | 16 | 3 | 16:1 | 80 | 95 | 70 | 27/5 | 72 | - | - | 71 | 20 | 2.30 |
| | 18 | 3 | 18:1 | 90 | 105 | 70 | 27/5 | 72 | - | - | 76 | 20 | 2.60 |
| | 20 | 3 | 20:1 | 100 | 115 | 70 | 27/5 | 72 | - | - | 81 | 25 | 3.00 |
| | 26 | 3 | 26:1 | 130 | 145 | 70 | 27/5 | 72 | 99 | 16 | 96 | 28 | 4.20 |
| | 32 | 3 | 32:1 | 160 | 175 | 75 | 27/5 | 72 | 125 | 16 | 111 | 30 | 5.30 |
| | 40 | 3 | 40:1 | 200 | 215 | 85 | 27/5 | 72 | 160 | 16 | 131 | 35 | 7.40 |
| | 52 | 3 | 52:1 | 260 | 275 | 100 | 32/5 | 77 | 220 | 16 | 161 | 40 | 11.80 |
| 65 | 3 | 65:1 | 325 | 340 | 115 | 32/5 | 77 | 280 | 16 | 193.5 | 45 | 17.00 | |
| b=34 | 16 | 3 | 16:1 | 96 | 114 | 70 | 20/5 | 65 | - | - | 88 | 25 | 4.90 |
| | 18 | 3 | 18:1 | 108 | 126 | 70 | 20/5 | 65 | - | - | 94 | 25 | 5.85 |
| | 20 | 3 | 20:1 | 120 | 138 | 75 | 20/5 | 65 | - | - | 100 | 25 | 7.11 |
| | 25 | 3 | 25:1 | 150 | 168 | 75 | 25/5 | 70 | 120 | 16 | 115 | 30 | 8.95 |
| | 30 | 3 | 30:1 | 180 | 198 | 80 | 25/5 | 70 | 140 | 16 | 130 | 30 | 12.70 |
| | 40 | 3 | 40:1 | 240 | 258 | 85 | 30/5 | 75 | 200 | 16 | 160 | 30 | 17.85 |
| | 50 | 3 | 50:1 | 300 | 318 | 90 | 30/5 | 75 | 260 | 16 | 190 | 30 | 26.31 |
| 60 | 3 | 60:1 | 360 | 378 | 90 | 30/5 | 75 | 320 | 16 | 220 | 30 | 39.70 | |



| Module | Type | d | da | ND | NL1 | G | NL2 | L | kg |
|--------|------|----|----|----|-----|----|-----|-----|-------|
| 1.0 | 1 | 14 | 16 | 10 | 30 | 24 | 2 | 74 | 0.06 |
| 1.5 | 1 | 25 | 28 | 20 | 40 | 40 | 30 | 110 | 0.30 |
| 2.0 | 1 | 32 | 36 | 25 | 50 | 45 | 36 | 131 | 0.62 |
| 3.0 | 2 | 38 | 44 | 30 | 130 | 46 | 90 | 266 | 1.60 |
| 4.0 | 2 | 50 | 58 | 40 | 175 | 62 | 120 | 357 | 3.80 |
| 5.0 | 2 | 62 | 72 | 50 | 220 | 80 | 150 | 450 | 7.60 |
| 6.0 | 2 | 80 | 92 | 65 | 220 | 80 | 150 | 450 | 12.80 |



| Module | Type | d | da | ND | L1 | L2 | G | L | B | kg |
|--------|------|----|----|----|----|----|----|-----|----|------|
| 1.0 | 1 | 14 | 16 | 11 | 6 | - | 24 | 30 | 6 | 0.12 |
| 1.5 | 1 | 25 | 28 | 21 | 10 | - | 40 | 50 | 8 | 0.16 |
| 2.0 | 1 | 32 | 36 | 25 | 10 | - | 45 | 55 | 8 | 0.30 |
| 3.0 | 2 | 38 | 44 | 30 | 12 | 3 | 46 | 61 | 15 | 0.40 |
| 4.0 | 2 | 50 | 58 | 40 | 15 | 4 | 62 | 81 | 20 | 1.20 |
| 5.0 | 2 | 62 | 72 | 50 | 18 | 5 | 80 | 103 | 25 | 1.80 |
| 6.0 | 2 | 80 | 92 | 65 | 20 | 20 | 80 | 120 | 25 | 3.60 |



TYPE 1

Centre distance a = 40mm

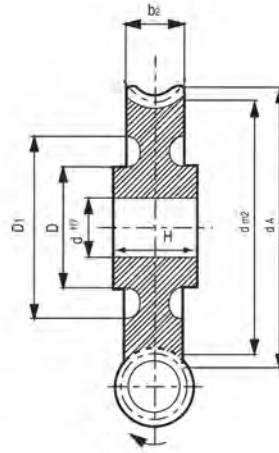
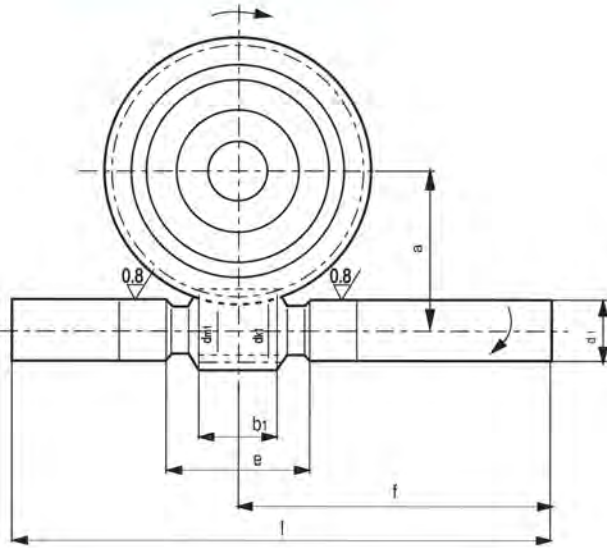
Type 1

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg |
|--------|--------|----|------|------|------|-----|----|-----|-----|----|-----------|------|----|----|----|----|-----|------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | H | D | D1 | dH7 | |
| 1.0 | 62:1 | 1 | 18.0 | 20.0 | 17.5 | 2.5 | 50 | 100 | 150 | 62 | 62.0 | 65.0 | 12 | 25 | 40 | - | 15 | 0.69 |
| 1.25 | 50:1 | 1 | 17.5 | 20.0 | 17.5 | 25 | 50 | 100 | 150 | 50 | 62.5 | 66.3 | 12 | 25 | 40 | - | 15 | 0.69 |
| 1.50 | 41:1 | 1 | 17.0 | 20.0 | 17.5 | 25 | 50 | 100 | 150 | 41 | 63.0 | 67.5 | 12 | 25 | 40 | - | 15 | 0.68 |
| | 20.5:1 | 2 | 17.0 | 20.0 | 17.5 | 25 | 50 | 100 | 150 | 41 | 63.0 | 67.5 | 12 | 25 | 40 | - | 15 | 0.68 |
| 20 | 29:1 | 1 | 20.0 | 24.0 | 17.5 | 28 | 50 | 100 | 150 | 29 | 60.0 | 66.0 | 14 | 25 | 40 | - | 15 | 0.71 |
| | 15:1 | 2 | 16.0 | 20.0 | 17.5 | 25 | 50 | 100 | 150 | 30 | 64.0 | 70.0 | 14 | 25 | 40 | - | 15 | 1.72 |
| | 6.75:1 | 4 | 16.0 | 20.0 | 17.5 | 25 | 50 | 100 | 150 | 27 | 64.0 | 70.0 | 14 | 25 | 40 | - | 15 | 0.72 |
| 2.5 | 12:1 | 2 | 19.5 | 24.5 | 17.5 | 30 | 50 | 400 | 150 | 24 | 60.5 | 68.0 | 16 | 25 | 40 | - | 15 | 0.73 |

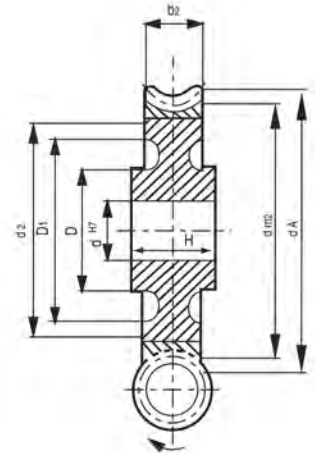
Centre distance a = 50mm

Type 1

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg |
|--------|--------|----|------|------|------|------|----|-----|-----|----|-----------|------|----|----|----|------|-----|------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | H | D | D1 | dH7 | |
| 1.0 | 82:1 | 1 | 17.0 | 19.0 | 17.5 | 25 | 50 | 115 | 180 | 82 | 83.0 | 86 | 12 | 30 | 50 | 61.0 | 20 | 1.00 |
| 1.25 | 62:1 | 1 | 23.4 | 24.9 | 20.5 | 25 | 50 | 115 | 180 | 62 | 77.6 | 81.0 | 15 | 30 | 50 | - | 20 | 1.20 |
| 1.5 | 52:1 | 1 | 21.0 | 24.0 | 20.5 | 28 | 60 | 115 | 180 | 52 | 29.0 | 83.5 | 14 | 30 | 50 | 66.0 | 20 | 1.20 |
| | 26:1 | 2 | 21.0 | 24.0 | 20.5 | 28 | 60 | 115 | 180 | 52 | 79.30 | 82.4 | 14 | 30 | 50 | 66.0 | 20 | 1.20 |
| 2.0 | 38:1 | 1 | 22.4 | 26.4 | 20.5 | 32 | 60 | 115 | 180 | 38 | 77.6 | 84.0 | 18 | 30 | 50 | 71.5 | 20 | 1.20 |
| | 19:1 | 2 | 22.4 | 26.4 | 20.5 | 32 | 60 | 115 | 180 | 38 | 77.6 | 84.0 | 18 | 30 | 50 | 71.5 | 20 | 1.20 |
| | 9:1 | 4 | 22.4 | 26.4 | 20.5 | 32 | 60 | 115 | 180 | 36 | 27.6 | 84.0 | 18 | 30 | 50 | 71.5 | 20 | 1.15 |
| 2.5 | 29:1 | 1 | 26.5 | 31.5 | 20.5 | 36 | 60 | 115 | 180 | 39 | 73.5 | 81.0 | 20 | 30 | 50 | - | 20 | 1.30 |
| | 14:1 | 2 | 26.5 | 31.5 | 20.5 | 36 | 60 | 115 | 180 | 28 | 73.5 | 81.0 | 20 | 30 | 50 | - | 20 | 1.30 |
| | 6.75:1 | 4 | 26.5 | 31.5 | 20.5 | 36 | 60 | 115 | 180 | 27 | 73.5 | 81.0 | 20 | 30 | 50 | - | 20 | 1.45 |
| 3.0 | 12:1 | 2 | 25.5 | 31.5 | 20.5 | 38.7 | 60 | 115 | 180 | 24 | 74.5 | 83.5 | 18 | 30 | 50 | 71.5 | 20 | 1.30 |



TYPE 1



TYPE 2

Centre distance a = 63mm

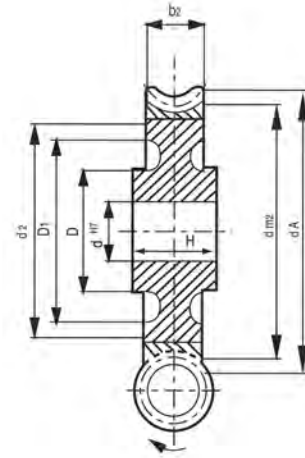
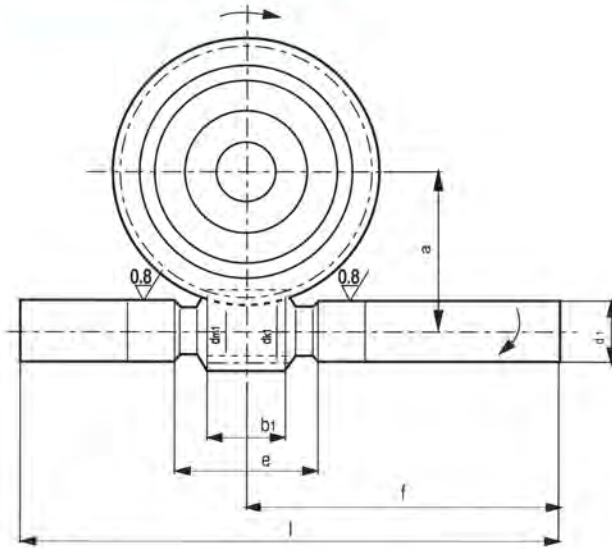
Type 1

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg |
|--------|---------|----|------|------|------|----|----|-----|-----|-----|-----------|-----|----|----|----|----|-----|------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | H | D | D1 | dH7 | |
| 1.0 | 109:1 | 1 | 17.0 | 19.0 | 20.5 | 28 | 60 | 130 | 210 | 109 | 109.0 | 112 | 13 | 35 | 60 | 91 | 25 | 1.70 |
| 1.25 | 82:1 | 1 | 22.4 | 24.9 | 20.5 | 28 | 60 | 130 | 210 | 82 | 103.0 | 109 | 15 | 35 | 60 | 87 | 25 | 1.65 |
| 1.6 | 61:1 | 1 | 28.0 | 31.2 | 25.5 | 32 | 60 | 120 | 210 | 61 | 98.0 | 103 | 18 | 35 | 60 | 83 | 25 | 2.05 |
| 2.0 | 51:1 | 1 | 27.4 | 26.4 | 25.5 | 36 | 75 | 130 | 210 | 51 | 103.6 | 110 | 18 | 35 | 60 | 86 | 25 | 2.10 |
| | 25.5:1 | 2 | 22.4 | 26.4 | 25.5 | 36 | 75 | 130 | 210 | 51 | 103.6 | 110 | 18 | 35 | 60 | 86 | 25 | 2.10 |
| | 12.25:1 | 4 | 22.4 | 26.4 | 25.5 | 36 | 75 | 130 | 210 | 49 | 103.6 | 110 | 18 | 35 | 60 | 86 | 25 | 2.00 |
| 2.5 | 39:1 | 1 | 26.5 | 31.5 | 25.5 | 40 | 75 | 130 | 210 | 39 | 99.5 | 107 | 20 | 35 | 60 | 81 | 25 | 2.20 |
| | 19.5:1 | 2 | 26.5 | 31.5 | 25.5 | 40 | 75 | 130 | 210 | 39 | 99.5 | 107 | 20 | 35 | 60 | 81 | 25 | 2.15 |
| | 9.25:1 | 4 | 26.5 | 31.5 | 25.5 | 40 | 75 | 130 | 210 | 37 | 99.5 | 107 | 20 | 35 | 60 | 81 | 25 | 2.20 |
| 3.15 | 29:1 | 1 | 33.5 | 39.8 | 25.5 | 45 | 75 | 130 | 210 | 29 | 92.5 | 102 | 26 | 35 | 60 | 79 | 25 | 2.30 |
| | 14.5:1 | 2 | 33.5 | 39.8 | 28.5 | 45 | 75 | 130 | 210 | 29 | 92.5 | 102 | 26 | 35 | 60 | 79 | 25 | 2.30 |
| | 6.75:1 | 4 | 33.5 | 39.8 | 25.5 | 45 | 75 | 130 | 210 | 27 | 92.5 | 102 | 26 | 35 | 60 | 79 | 25 | 2.30 |

Centre distance a = 80mm

Type 2

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg | |
|--------|---------|----|------|------|------|----|----|-----|-----|-----|-----------|-----|----|-----|----|----|----|----|------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | H | dx | D | D1 | | dH7 |
| 1.25 | 109:1 | 1 | 22.4 | 24.9 | 25.5 | 34 | 70 | 170 | 270 | 109 | 137.6 | 141 | 16 | 119 | 50 | 70 | 95 | 30 | 3.15 |
| 1.6 | 82:1 | 1 | 28.0 | 31.2 | 30.5 | 38 | 80 | 170 | 270 | 82 | 132.0 | 137 | 20 | 110 | 50 | 70 | 87 | 30 | 3.80 |
| 2.0 | 62:1 | 1 | 35.5 | 39.6 | 30.5 | 40 | 80 | 170 | 270 | 62 | 124.5 | 131 | 22 | 104 | 50 | 70 | 85 | 30 | 3.90 |
| 2.5 | 53:1 | 1 | 26.5 | 31.5 | 30.5 | 46 | 95 | 170 | 270 | 53 | 133.5 | 141 | 22 | 109 | 50 | 70 | 87 | 30 | 3.80 |
| | 26:1 | 2 | 26.5 | 31.5 | 30.5 | 46 | 95 | 170 | 270 | 52 | 133.5 | 141 | 22 | 109 | 50 | 70 | 87 | 30 | 3.85 |
| | 12.25:1 | 4 | 26.5 | 31.5 | 30.5 | 46 | 95 | 170 | 270 | 49 | 133.5 | 141 | 32 | 109 | 50 | 70 | 87 | 30 | 3.95 |
| 3.15 | 40:1 | 1 | 33.5 | 39.8 | 30.5 | 50 | 95 | 170 | 270 | 40 | 126.5 | 136 | 26 | 100 | 50 | 70 | 80 | 30 | 4.10 |
| | 19.5:1 | 2 | 33.5 | 39.8 | 30.5 | 50 | 95 | 170 | 270 | 39 | 126.5 | 136 | 26 | 100 | 50 | 70 | 80 | 30 | 4.15 |
| | 9.25:1 | 4 | 33.5 | 39.8 | 30.5 | 50 | 95 | 170 | 270 | 37 | 126.5 | 136 | 26 | 100 | 50 | 70 | 80 | 30 | 4.25 |
| 4.0 | 29:1 | 1 | 40.0 | 48.0 | 30.5 | 55 | 95 | 170 | 270 | 29 | 120.0 | 132 | 32 | 89 | 50 | 70 | - | 30 | 4.45 |
| | 14.5:1 | 2 | 40.0 | 48.0 | 30.5 | 55 | 95 | 170 | 270 | 29 | 120.0 | 132 | 32 | 89 | 50 | 70 | - | 30 | 4.45 |
| | 6.75:1 | 4 | 40.0 | 48.0 | 30.5 | 55 | 95 | 170 | 270 | 27 | 120.0 | 132 | 32 | 89 | 50 | 70 | - | 30 | 4.50 |



TYPE 2

Centre distance a = 100mm

Type 2

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg | |
|--------|--------|----|------|------|------|----|-----|------|------|-----|-----------|-----|----|-----|----|----|-----|----|-------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | dx | H | D | D1 | | dH7 |
| 1.6 | 107:1 | 1 | 28.0 | 31.2 | 30.5 | 42 | 90 | 22.5 | 35.0 | 107 | 172 | 177 | 20 | 152 | 60 | 85 | 128 | 40 | 6.10 |
| 2.0 | 82:1 | 1 | 35.5 | 39.5 | 40.5 | 46 | 90 | 225 | 350 | 82 | 164.5 | 171 | 24 | 142 | 60 | 85 | 118 | 40 | 17.40 |
| 2.5 | 62:1 | 1 | 42.5 | 47.5 | 40.5 | 50 | 90 | 225 | 350 | 62 | 157.5 | 165 | 28 | 134 | 60 | 85 | 112 | 40 | 7.60 |
| 3.15 | 52:1 | 1 | 33.5 | 39.8 | 40.5 | 58 | 110 | 225 | 350 | 52 | 166.5 | 176 | 26 | 140 | 60 | 85 | 115 | 40 | 7.70 |
| | 36:1 | 2 | 33.5 | 39.8 | 40.5 | 58 | 110 | 225 | 350 | 52 | 166.5 | 176 | 26 | 140 | 60 | 85 | 115 | 40 | 7.50 |
| | 12.25: | 4 | 33.5 | 39.8 | 40.5 | 58 | 110 | 225 | 350 | 49 | 166.5 | 176 | 26 | 140 | 60 | 85 | 115 | 40 | 7.60 |
| 4.0 | 39:1 | 1 | 40.0 | 48.0 | 40.5 | 64 | 110 | 225 | 350 | 39 | 160.0 | 172 | 32 | 128 | 60 | 85 | - | 40 | 8.30 |
| | 19.5:1 | 2 | 40.0 | 48.0 | 40.5 | 64 | 110 | 225 | 350 | 39 | 160.0 | 172 | 32 | 128 | 60 | 85 | - | 40 | 8.30 |
| | 9.25:1 | 4 | 40.0 | 48.0 | 40.5 | 64 | 110 | 225 | 350 | 37 | 160.0 | 172 | 32 | 128 | 60 | 85 | - | 40 | 8.30 |
| 5.0 | 29:1 | 1 | 50.0 | 60.0 | 40.5 | 70 | 110 | 225 | 350 | 29 | 150.0 | 165 | 38 | 112 | 60 | 85 | - | 40 | 9.10 |
| | 14.5:1 | 2 | 50.0 | 60.0 | 40.5 | 70 | 11 | 225 | 350 | 29 | 150.0 | 165 | 38 | 112 | 60 | 85 | - | 40 | 9.10 |
| | 675:1 | 4 | 50.0 | 60.0 | 40.5 | 70 | 110 | 225 | 350 | 27 | 150.0 | 165 | 38 | 112 | 60 | 85 | - | 40 | 9.00 |

Centre distance a = 125mm

Type 2

| Module | i | Z1 | worm | | | | | | | Z2 | worm gear | | | | | | | Kg | |
|--------|--------|------|------|------|------|-----|-----|-----|-----|-------|-----------|-----|-----|-----|-----|-----|-----|-------|------|
| | | | dm1 | dk1 | d1 | b1 | e | f | i | | dm2 | dA | b2 | dx | H | D | D1 | | dH7 |
| 2.0 | 107:1 | 1 | 35.5 | 39.5 | 40.5 | 52 | 105 | 255 | 410 | 107 | 214.5 | 221 | 24 | 192 | 70 | 105 | 168 | 50 | 4.9 |
| 2.5 | 82:1 | 1 | 42.5 | 47.5 | 45.5 | 58 | 105 | 255 | 410 | 82 | 207.5 | 215 | 28 | 184 | 70 | 105 | 160 | 50 | 13.0 |
| 3.15 | 62:1 | 53.0 | 59.3 | 50.5 | 64 | 105 | 255 | 410 | 62 | 197.0 | 207 | 34 | 169 | 70 | 105 | 145 | 50 | 14.60 | |
| 4.0 | 52:1 | 1 | 40.0 | 48.0 | 50.5 | 75 | 135 | 205 | 410 | 52 | 210.0 | 222 | 32 | 179 | 70 | 105 | 155 | 50 | 14.2 |
| | 25.5:1 | 2 | 40.0 | 48.0 | 50.5 | 75 | 135 | 255 | 410 | 51 | 210.0 | 222 | 32 | 179 | 70 | 105 | 155 | 50 | 14.5 |
| | 12:1 | 4 | 40.0 | 48.0 | 50.5 | 75 | 135 | 275 | 410 | 48 | 210.0 | 222 | 32 | 179 | 70 | 105 | 155 | 50 | 14.5 |
| 5.0 | 39:1 | 1 | 50.0 | 60.0 | 50.5 | 82 | 135 | 255 | 410 | 39 | 200.0 | 215 | 38 | 160 | 70 | 105 | 136 | 50 | 15.5 |
| | 19.5:1 | 2 | 50.0 | 60.0 | 50.5 | 82 | 135 | 255 | 410 | 39 | 200.0 | 215 | 38 | 160 | 70 | 105 | 136 | 50 | 13.7 |
| | 9:1 | 4 | 50.0 | 60.0 | 50.5 | 82 | 135 | 255 | 410 | 36 | 200.0 | 215 | 38 | 160 | 70 | 105 | 136 | 50 | 15.5 |
| 6.3 | 29:1 | 1 | 63.0 | 75.6 | 50.5 | 85 | 135 | 255 | 410 | 29 | 187.0 | 206 | 50 | 142 | 70 | 105 | 117 | 50 | 17.7 |
| | 14.5:1 | 2 | 63.0 | 75.6 | 50.5 | 85 | 135 | 255 | 410 | 29 | 187.0 | 206 | 50 | 142 | 70 | 105 | 117 | 50 | 17.6 |
| | 6.75:1 | 4 | 63.0 | 75.6 | 50.5 | 85 | 135 | 255 | 410 | 27 | 187.0 | 206 | 142 | 142 | 70 | 105 | 117 | 50 | 18.0 |



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