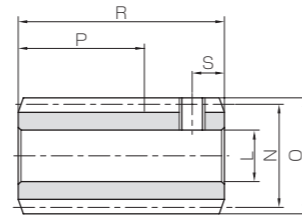




| Specifications | |
|---------------------------|---------------------|
| Precision grade | KHK W 001 grade 4 |
| Reference section of gear | Normal plane |
| Gear teeth | Standard full depth |
| Normal pressure angle | 20° |
| Material | S45C |
| Heat treatment | — |
| Tooth hardness | (less than 194HB) |
| Surface treatment | Black oxide coating |



W2

| Catalog No. | Normal module | Number of starts | Lead angle | Hand thread | Shape | Bore | | Hub dia. | Pitch dia. | Outside dia. | Face width | Hub width (R) | | Hub width (L) | |
|-------------|---------------|------------------|------------|-------------|-------|---------------------|---|----------|------------|--------------|------------|---------------|---|---------------|---|
| | | | | | | L _{H7(H8)} | M | | | | | N | O | P | Q |
| KSW1-R1 | m1 | 1 | 3°35' | R | W2 | 6 _{H8} | — | — | 16 | 18 | (20) | — | — | — | — |
| KSW1-R2 | | 2 | 7°11' | R | W2 | 6 _{H8} | — | — | 16 | 18 | (20) | — | — | — | — |
| KSW1.25-R1 | m1.25 | 1 | 3°25' | R | W2 | 8 | — | — | 21 | 23.5 | (25) | — | — | — | — |
| KSW1.25-R2 | | 2 | 6°50' | R | W2 | 8 | — | — | 21 | 23.5 | (25) | — | — | — | — |

- [Caution on Product Characteristics] ① For W2-shaped products, a set screw is included. When setting up the mating wheel, make sure no friction occurs within the set screw.
 ② These worms produce axial thrust forces. See Page 362 for more details.

| Total length | Set Screw | | Weight (kg) | Catalog No. |
|--------------|-----------|---|-------------|-------------|
| | R | S | | |
| 32 | M4 | 5 | 0.043 | KSW1-R1 |
| 32 | M4 | 5 | 0.043 | KSW1-R2 |
| 37 | M5 | 5 | 0.085 | KSW1.25-R1 |
| 37 | M5 | 5 | 0.085 | KSW1.25-R2 |

- [Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 362) when performing modifications and/or secondary operations for safety concerns.
 ② Gear tooth hardening of the worm reduces the precision (introduces errors in the lead and pressure angles). Avoid heat treating as it will create bad tooth contact causing abrasion of the wheel.

KBG · CG Bronze Worm Wheels & Gray Iron Worm Wheels J Series

Module 1, 1.25

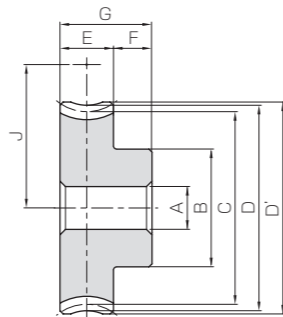
KBG · CG



| Specifications | |
|---------------------------|--------------------------------------|
| Catalog No. | BG CG |
| Precision grade | KHK W 002 grade 4 * |
| Reference section of gear | Normal plane |
| Gear teeth | Standard full depth |
| Normal pressure angle | 20° |
| Material | CAC502 (formerly JIS PBC2) FC200 * * |
| Heat treatment | — |
| Tooth hardness | — |

* The precision grade of J Series products is equivalent to the value shown in the table.
 * * FC200's tensile strength (200N/mm²) is derived from test specimens and differs according to the product shape.

| | |
|-----------------|-------------------|
| A _{H7} | Bore |
| B | Hub dia. |
| C | Pitch dia. |
| D | Throat dia. |
| D' | Outside dia. |
| E | Face width |
| F | Hub width |
| G | Total length |
| (H) | Web thickness |
| (I) | Web O.D. |
| J | Mounting distance |



H1

NOTE 1 : Allowable torque based on worm speed (rpm)

| Catalog No. | Reduction ratio | No. of teeth | Number of starts | Helix angle | Hand thread | Shape | A _{H7} | B | C | D | D' | E | F | G | J | Allowable torque (N·m) NOTE 1 | | | | | | Backlash (mm) | Weight (kg) | | |
|--------------|-----------------|--------------|------------------|-------------|-------------|-------|-----------------|--------|-------|------|-------|----|----|----|-------|-------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------|-------------|-----------|-------|
| | | | | | | | | | | | | | | | | 30 _{rpm} | 100 _{rpm} | 300 _{rpm} | 600 _{rpm} | 900 _{rpm} | 1200 _{rpm} | | | | |
| KBG1-20R1 | 20 | 20 | 1 | 3°35' | R | H1 | 6 | 16 | 20.05 | 22 | 23 | — | — | — | — | 18 | 1.89 | 1.58 | 1.26 | 1.04 | 0.92 | 0.85 | 0.043 | 0.06~0.24 | 0.089 |
| KBG1-20R2 | 10 | 20 | 2 | 7°11' | R | H1 | 6 | 16 | 20.16 | 22 | 23 | — | — | — | 18 | 1.90 | 1.54 | 1.18 | 0.97 | 0.85 | 0.78 | 0.043 | | | |
| KBG1-30R1 | 30 | 30 | 1 | 3°35' | R | H1 | 6 | 20 | 30.07 | 32 | 33 | 10 | 10 | 20 | 23 | 4.00 | 3.38 | 2.74 | 2.29 | 2.05 | 1.87 | 0.089 | | | |
| KBG1-30R2 | 15 | 30 | 2 | 7°11' | R | H1 | 6 | 20 | 30.24 | 32 | 33 | — | — | — | 23 | 4.03 | 3.35 | 2.62 | 2.14 | 1.91 | 1.74 | 0.089 | | | |
| KBG1-40R1 | 40 | 40 | 1 | 3°35' | R | H1 | 8 | 26 | 40.08 | 42 | 43 | — | — | — | 28 | 6.85 | 5.79 | 4.76 | 4.03 | 3.61 | 3.31 | 0.15 | | | |
| KBG1-50R1 | 50 | 50 | 1 | 3°35' | R | H1 | 8 | 30 | 50.1 | 52 | 53 | — | — | — | 33 | 10.3 | 8.76 | 7.27 | 6.18 | 5.58 | 5.14 | 0.23 | | | |
| KBG1.25-20R1 | 20 | 20 | 1 | 3°25' | R | H1 | 6 | 20 | 25.04 | 27.5 | 28.75 | — | — | — | 23 | 3.19 | 2.65 | 2.10 | 1.72 | 1.53 | 1.40 | 0.070 | 0.08~0.26 | 0.15 | |
| KBG1.25-20R2 | 10 | 20 | 2 | 6°50' | R | H1 | 6 | 20 | 25.18 | 27.5 | 28.75 | — | — | — | 23 | 3.19 | 2.58 | 1.96 | 1.60 | 1.40 | 1.27 | 0.070 | | | |
| KBG1.25-30R1 | 30 | 30 | 1 | 3°25' | R | H1 | 6 | 25 | 37.57 | 40 | 41.25 | 11 | 9 | 20 | 29.25 | 6.75 | 5.67 | 4.56 | 3.81 | 3.40 | 3.09 | 0.15 | | | |
| KBG1.25-30R2 | 15 | 30 | 2 | 6°50' | R | H1 | 6 | 25 | 37.77 | 40 | 41.25 | — | — | — | 29.25 | 6.77 | 5.60 | 4.33 | 3.54 | 3.16 | 2.85 | 0.15 | | | |
| KBG1.25-40R1 | 40 | 40 | 1 | 3°25' | R | H1 | 8 | 30 | 50.09 | 52.5 | 53.75 | — | — | — | 35.5 | 11.5 | 9.71 | 7.92 | 6.70 | 5.98 | 5.47 | 0.24 | | | |
| KBG1.25-50R1 | 50 | 50 | 1 | 3°25' | R | H1 | 8 | 40 | 62.61 | 65 | 66.25 | — | — | — | 41.75 | 17.4 | 14.7 | 12.1 | 10.3 | 9.25 | 8.49 | 0.40 | | | |
| KCG1-60R1 | 60 | 60 | — | — | — | — | 10 | 30 | 60.12 | 62 | 63 | — | — | — | 38 | 8.69 | 7.39 | 6.14 | 5.24 | 4.78 | 4.39 | 0.25 | 0.06~0.24 | 0.43 | |
| KCG1-80R1 | 80 | 80 | 1 | 3°35' | R | H1 | 35 | 80.16 | 82 | 83 | 10 | 10 | 20 | 48 | 14.7 | 12.6 | 10.5 | 9.11 | 8.30 | 7.72 | 0.43 | | | | |
| KCG1-100R1 | 100 | 100 | — | — | — | — | 40 | 100.2 | 102 | 103 | — | — | — | 58 | 21.9 | 19.0 | 16.0 | 13.9 | 12.7 | 11.9 | 0.66 | | | | |
| KCG1-120R1 | 120 | 120 | — | — | — | — | 40 | 120.24 | 122 | 123 | — | — | — | 68 | 30.5 | 26.7 | 22.5 | 19.6 | 18.0 | 16.7 | 0.91 | | | | |

- [Caution on Product Characteristics] ① Worm Wheels are profile shifted to create the proper center distance.
 ② The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see Page 358 for more details.
 ③ If bore size is less than φ 4, the diameter tolerance is H8. If bore size is φ 5 or φ 6, and the hole length exceeds 3 times the diameter, the tolerance is also H8.

- [Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 362) when performing modifications and/or secondary operations for safety concerns.

J Series Bronze Worm Wheels & Gray Iron Worm Wheels

To order J Series products, please specify; Catalog No. + J + BORE

| Bore H7 | * The product shapes of J Series items are identified by background color. | | | | | | | | | | | |
|---------------------|--|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|----|
| | 6 | 8 | 10 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 |
| Keyway Js9 | — | | 4 × 1.8 | | | 5 × 2.3 | | | 6 × 2.8 | | | |
| Screw size | — | | 4 × 1.8 | | | 5 × 2.3 | | | 6 × 2.8 | | | |
| Catalog No. | M4 | M5 | M4 | | | | M5 | | | | | |
| KBG1-20R1 J Bore | H1T | | | | | | | | | | | |
| KBG1-20R2 J Bore | H1T | | | | | | | | | | | |
| KBG1-30R1 J Bore | H1T | H1T | | | | | | | | | | |
| KBG1-30R2 J Bore | H1T | H1T | | | | | | | | | | |
| KBG1-40R1 J Bore | | H1T | H1K | H1K | | | | | | | | |
| KBG1-50R1 J Bore | | H1T | H1K | H1K | H1K | H1K | H1K | H1K | | | | |
| KBG1.25-20R1 J Bore | H1T | H1T | | | | | | | | | | |
| KBG1.25-20R2 J Bore | H1T | H1T | | | | | | | | | | |
| KBG1.25-30R1 J Bore | H1T | H1T | H1K | H1K | | | | | | | | |
| KBG1.25-30R2 J Bore | H1T | H1T | H1K | H1K | | | | | | | | |
| KBG1.25-40R1 J Bore | | H1T | H1K | H1K | H1K | H1K | H1K | H1K | | | | |
| KBG1.25-50R1 J Bore | | H1T | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | | |
| KCG1-60R1 J Bore | | | H1K | H1K | H1K | H1K | H1K | H1K | | | | |
| KCG1-80R1 J Bore | | | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | | |
| KCG1-100R1 J Bore | | | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | |
| KCG1-120R1 J Bore | | | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | H1K | |

- [Caution on J series] ① As available-on-request products, requires a lead-time for shipping within 2 working-days (excludes the day ordered), after placing an order. Please allow additional shipping time to get to your local distributor.
 ② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
 ③ Keyways are made according to JIS B1301 standards, Js9 tolerance.
 ④ Certain products which would otherwise have a very long tapped hole are counterbored to reduce the length of the tap.
 ⑤ For products having a tapped hole, a set screw is included.
 ⑥ When using H1T set screws for fastening gears to a shaft, only use this method for light loads. For secure fastening, please use dowel pins in combination.