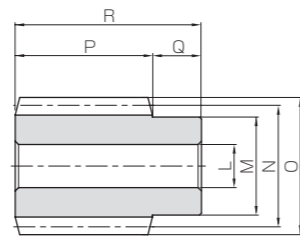




Specifications	
Precision grade	KHK W 001 grade 4
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14° 30'
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



W1

Catalog No.	Normal module	Number of starts	Lead angle	Hand thread	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width (R)		Hub width (L)
						L _{H7}	M				N	O	
KSW4-R1	m4	1	3°42'	R	W1	22	50	62	70	70	25	—	—
KSW4-R2		2	7°25'	R	W1	22	50	62	70	70	25	—	
KSW4-L1	m4	1	3°42'	L	W1	22	50	62	70	70	25	—	—
KSW4-L2		2	7°25'	L	W1	22	50	62	70	70	25	—	

[Caution on Product Characteristics] ① These worms produce axial thrust forces. See Page 362 for more details.

Total length	Set Screw		Weight (kg)	Catalog No.
	R	S		
95	—	—	1.76	KSW4-R1
95	—	—	1.76	KSW4-R2
95	—	—	1.76	KSW4-L1
95	—	—	1.76	KSW4-L2

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

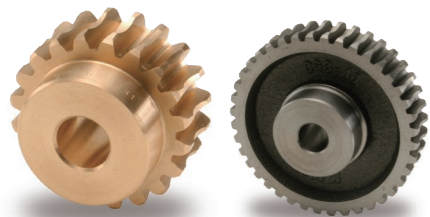
② Gear tooth hardening of the worm reduces the precision (introduces errors in the lead and pressure angles). Avoid heat treating as it will create bad tooth contact causing abrasion of the wheel.

KBG · KCG Bronze Worm Wheels & Gray Iron Worm Wheels

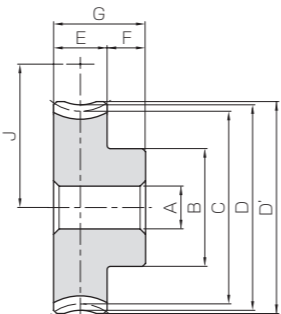
Module 4

KBG · KCG

Bronze Worm Wheels & Gray Iron Worm Wheels



Specifications		
Catalog No.	KBG	KCG
Precision grade	KHK W 002 grade 4	KHK W 002 grade 4
Reference section of gear	Normal plane	Normal plane
Gear teeth	Standard full depth	Standard full depth
Normal pressure angle	14° 30'	14° 30'
Material	CAC502 (formerly JIS PBC2)	FC200 *
Heat treatment	—	—
Tooth address	—	—



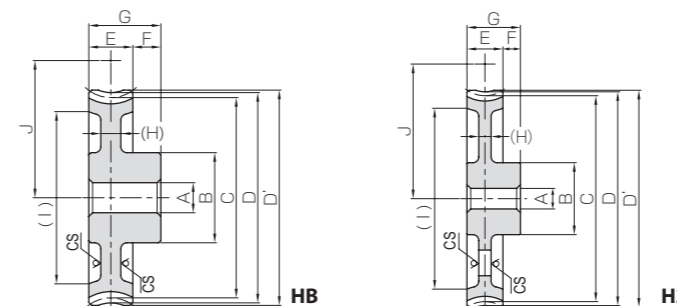
H1

* FC200's tensile strength (200N/mm²) is derived from test specimens and differs according to the product shape.

Catalog No.	Reduction ratio	Normal module	No. of teeth	Number of starts	Helix angle	Hand thread	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
KBG4-20R1	20	m4	20	1	3°42'	R	H1	20	60	80.17	88	90	35
KBG4-20R2	10		20	2	7°25'	R	H1	20	60	80.67	88	90	35
KBG4-20L1	20		20	1	3°42'	L	H1	20	60	80.17	88	90	35
KBG4-20L2	10		20	2	7°25'	L	H1	20	60	80.67	88	90	35

Catalog No.	Reduction ratio	Normal module	No. of teeth	Number of starts	Helix angle	Hand thread	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
KCG4-20R1	20	m4	20	1	3°42'	R	H1	20	60	80.17	88	90	35
KCG4-20R2	10		20	2	7°25'	R	H1	20	60	80.67	88	90	35
KCG4-30R1	30		30	1	3°42'	R	HB	20	60	120.25	128	130	35
KCG4-30R2	15		30	2	7°25'	R	HB	20	60	121.01	128	130	35
KCG4-40R1	40		40	1	3°42'	R	HB	20	70	160.33	168	171	35
KCG4-50R1	50		50	1	3°42'	R	H2	20	70	200.42	208	211	35
KCG4-50R2	25		50	2	7°25'	R	H2	20	70	201.69	208	211	35
KCG4-60R1	60		60	1	3°42'	R	H2	20	80	240.5	248	251	35
KCG4-20L1	20		20	1	3°42'	L	H1	20	60	80.17	88	90	35
KCG4-20L2	10		20	2	7°25'	L	H1	20	60	80.67	88	90	35
KCG4-30L1	30		30	1	3°42'	L	HB	20	60	120.25	128	130	35
KCG4-30L2	15		30	2	7°25'	L	HB	20	60	121.01	128	130	35
KCG4-40L1	40	40	1	3°42'	L	HB	20	70	160.33	168	171	35	
KCG4-50L1	50	50	1	3°42'	L	H2	20	70	200.42	208	211	35	
KCG4-50L2	25	50	2	7°25'	L	H2	20	70	201.69	208	211	35	
KCG4-60L1	60	60	1	3°42'	L	H2	20	80	240.5	248	251	35	

[Caution on Product Characteristics] ① Worm Wheels are profile shifted to create the proper center distance.
 ② H2 Shape Worm Gears have elongated casting holes in the web (H).
 ③ The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see Page 358 for more details.



* CS has a sand mold casting finish.

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

Hub width	Total length	Mounting distance	Allowable torque (N·m) NOTE 1						Backlash (mm)	Weight (kg)	Catalog No.
			30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
F	G	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}	0.17~0.37	1.91	KBG4-20R1
17	52	71	75.9	61.7	47.9	38.4	33.7	30.1			
17	52	71	75.9	60.0	44.8	35.7	30.9	27.5	0.17~0.37	1.91	KBG4-20R2
17	52	71	75.9	61.7	47.9	38.4	33.7	30.1	0.17~0.37	1.91	KBG4-20L1
17	52	71	75.9	60.0	44.8	35.7	30.9	27.5	0.17~0.37	1.91	KBG4-20L2

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

Hub width	Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) NOTE 1				Backlash (mm)	Weight (kg)	Catalog No.
					30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}			
F	G	(H)	(I)	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	0.17~0.37	1.56	KCG4-20R1
17	52	—	—	71	45.6	37.0	28.7	23.0			
17	52	—	—	71	45.5	36.0	26.9	21.4	0.17~0.37	1.56	KCG4-20R2
17	52	(12)	(96)	91	96.3	79.1	62.3	50.9	0.17~0.37	2.52	KCG4-30R1
17	52	(12)	(96)	91	96.8	78.3	59.4	47.3	0.17~0.37	2.52	KCG4-30R2
17	52	(11)	(136)	111	165	136	108	89.4	0.17~0.37	3.81	KCG4-40R1
17	52	(12)	(176)	131	249	205	165	137	0.17~0.37	4.78	KCG4-50R1
17	52	(12)	(176)	131	250	204	160	130	0.17~0.37	4.78	KCG4-50R2
17	52	(12)	(218)	151	348	288	233	194	0.17~0.37	6.36	KCG4-60R1
17	52	—	—	71	45.6	37.0	28.7	23.0	0.17~0.37	1.56	KCG4-20L1
17	52	—	—	71	45.5	36.0	26.9	21.4	0.17~0.37	1.56	KCG4-20L2
17	52	(12)	(96)	91	96.3	79.1	62.3	50.9	0.17~0.37	2.52	KCG4-30L1
17	52	(12)	(96)	91	96.8	78.3	59.4	47.3	0.17~0.37	2.52	KCG4-30L2
17	52	(11)	(136)	111	165	136	108	89.4	0.17~0.37	3.81	KCG4-40L1
17	52	(12)	(176)	131	249	205	165	137	0.17~0.37	4.78	KCG4-50L1
17	52	(12)	(176)	131	250	204	160	130	0.17~0.37	4.78	KCG4-50L2
17	52	(12)	(218)	151	348	288	233	194	0.17~0.37	6.36	KCG4-60L1

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