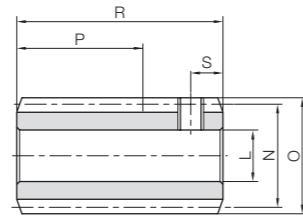




Specifications	
Precision grade	KHK W 001 grade 4
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



W2

Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H8}	M	N	O	P	Q	Q'
SW0.5-R1 SW0.5-R2	m0.5	1 2	2°36' 5°13'	R	W2	5	—	11	12	(10)	—	—
SW0.8-R1 SW0.8-R2	m0.8	1 2	3°17' 6°34'	R	W2	6	—	14	15.6	(18)	—	—

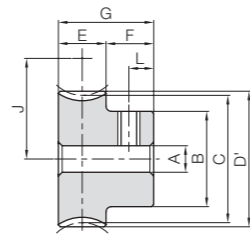
Total length	Socket head screw		Weight (kg)	Catalog Number
	R	S		
18	M3	3	0.010	SW0.5-R1 SW0.5-R2
30	M4	5	0.029	SW0.8-R1 SW0.8-R2

BG Module 0.5, 0.8
Worm Wheels

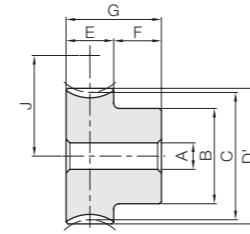
Bronze Worm Wheels



Specifications	
Precision grade	KHK W 002 grade 4
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC502 (old JIS PBC2)
Heat Treatment	—
Tooth hardness	—



HAT



HA



Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B	C	D	D'	E
BG0.5-20R1 BG0.5-20R2 BG0.5-30R1 BG0.5-30R2 BG0.5-40R1	20 10 30 15 40	m0.5	20 20 30 30 40	1 2 1 2 1	2°36' 5°13' 2°36' 5°13' 2°36'	R	HAT	4 4 4 4 5	9 9 12 12 15	10.01 10.04 15.02 15.06 20.02	—	11 11 16 16 21	5
BG0.5-50R1 BG0.5-60R1	50 60		50 60	1 1	2°36' 2°36'			5 5	20 25	25.03 30.03		26 31	

Hub width	Total length	Mounting distance	Socket head screw		Allowable torque (N·m) ^{NOTE 1}						Backlash (mm)	Weight (kg)	Catalog Number
			Size	L	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
7	12	10.5	M3	3.5	0.27	0.23	0.19	0.15	0.14	0.13	0~0.16	0.0061	BG0.5-20R1 BG0.5-20R2 BG0.5-30R1 BG0.5-30R2 BG0.5-40R1
			M3		0.28	0.23	0.18	0.15	0.13	0.12		0.0061	
			M3		0.58	0.50	0.41	0.34	0.30	0.28		0.014	
			M3		0.59	0.49	0.39	0.32	0.29	0.26		0.014	
			M4		0.99	0.85	0.71	0.60	0.54	0.50		0.023	
			M4		1.50	1.28	1.08	0.92	0.83	0.77		0.039	
7	12	18	M4	3.5	1.50	1.28	1.08	0.92	0.83	0.77	0~0.16	0.039	BG0.5-50R1 BG0.5-60R1
			M4		2.10	1.80	1.52	1.31	1.19	1.09		0.059	
			M4		2.10	1.80	1.52	1.31	1.19	1.09		0.059	

Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B	C	D	D'	E
BG0.8-20R1 BG0.8-20R2 BG0.8-30R1 BG0.8-30R2 BG0.8-40R1	20 10 30 15 40	m0.8	20 20 30 30 40	1 2 1 2 1	3°17' 6°34' 3°17' 6°34' 3°17'	R	HA	5 5 5 5 6	12 12 18 18 20	16.03 16.11 24.04 24.16 32.05	—	17.6 17.6 25.6 25.6 33.6	9
BG0.8-50R1 BG0.8-60R1	50 60		50 60	1 1	3°17' 3°17'			8 8	25 25	40.06 48.08		41.6 49.6	

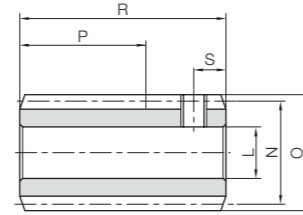
Hub width	Total length	Mounting distance	Allowable torque (N·m) ^{NOTE 1}						Backlash (mm)	Weight (kg)	Catalog Number						
			30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}									
9	18	15	1.05	0.88	0.71	0.58	0.52	0.48	0.04~0.22	0.023	BG0.8-20R1 BG0.8-20R2 BG0.8-30R1 BG0.8-30R2 BG0.8-40R1						
			1.06									0.66	0.54	0.48	0.44	0.023	
			1.23									1.89	1.53	1.29	1.15	1.06	0.055
			1.24									1.87	1.46	1.20	1.07	0.98	0.055
			3.81									3.24	2.67	2.26	2.02	1.87	0.087
			5.76									4.90	4.07	3.47	3.13	2.90	0.13
9	18	27	5.76	6.88	5.73	4.90	4.46	4.12	0.13	0.18	BG0.8-50R1 BG0.8-60R1						
			8.06									6.88	5.73	4.90	4.46	4.12	0.18

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.

[NOTE 1] Allowable torque based on worm speed (rpm).



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

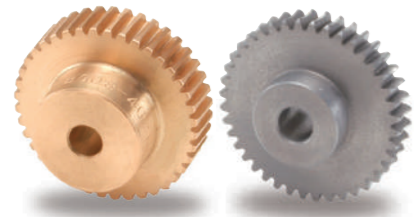


W2

Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7(H8)}	M	N	O	P	Q	Q'
SW1-R1 SW1-R2	m1	1 2	3°35' 7°11'	R	W2	6 ^{H8}	—	16	18	(20)	—	—
SW1.25-R1 SW1.25-R2	m1.25	1 2	3°25' 6°50'	R	W2	8	—	21	23.5	(25)	—	—

Total length	Socket head screw		Weight (kg)	Catalog Number
R	Size	S		
32	M4	5	0.043	SW1-R1 SW1-R2
37	M5	5	0.085	SW1.25-R1 SW1.25-R2

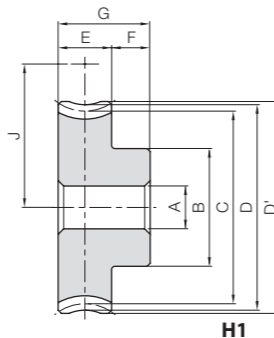
BG/CG Module 1, 1.25
Worm Wheels



Specifications	
Catalog Number	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 (old JIS PBC2) FC200
Heat treatment	—
Tooth hardness	—

* The precision grade of J Series products is equivalent to the value shown in the table.

A _{H7}	Bore
B	Hub dia.
C	Pitch dia.
D	Throat dia.
D'	Outside dia.
E	Face width
F	Hub width
G	Total length
J	Mounting distance



H1

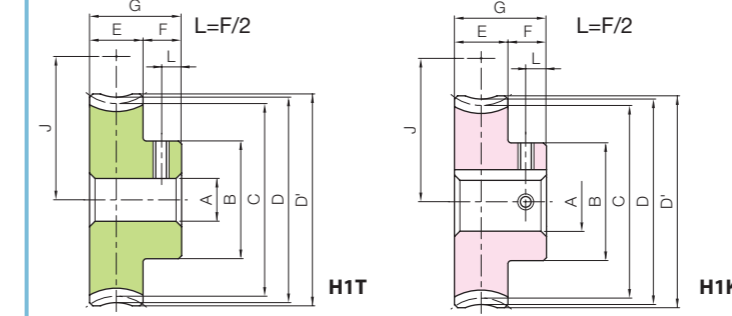
Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A _{H7}	B	C	D	D'	E	F	G	J	Allowable torque (N-m) <small>NOTE 1</small>						Backlash (mm)	Weight (kg)
															30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm		
BG1-20R1	20	20	1	3°35'	R	H1	6	16	20.05	22	23			18	1.89	1.58	1.26	1.04	0.92	0.85	0.06~0.24	0.043
BG1-20R2	10	20	2	7°11'			6	16	20.16	22	23			18	1.90	1.54	1.18	0.97	0.85	0.78	0.043	
BG1-30R1	30	30	1	3°35'			6	20	30.07	32	33	10	10	23	4.00	3.38	2.74	2.29	2.05	1.87	0.089	
BG1-30R2	15	30	2	7°11'			6	20	30.24	32	33			23	4.03	3.35	2.62	2.14	1.91	1.74	0.089	
BG1-40R1	40	40	1	3°35'			8	26	40.08	42	43			28	6.85	5.79	4.76	4.03	3.61	3.31	0.15	
BG1-50R1	50	50	1	3°35'			8	30	50.10	52	53			33	10.3	8.76	7.27	6.18	5.58	5.14	0.23	
BG1.25-20R1	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	
BG1.25-20R2	10	20	2	6°50'			6	20	25.18	27.5	28.75	11	9	23	3.19	2.58	1.96	1.60	1.40	1.27	0.08~0.26	0.070
BG1.25-50R1	50	50	1	3°25'			8	40	62.61	65	66.25			41.75	17.4	14.7	12.1	10.3	9.25	8.49	0.40	
CG1-60R1	60	60					30	60.12	62	63				38	8.69	7.39	6.14	5.24	4.78	4.39	0.25	
CG1-80R1	80	80	1	3°35'	R	H1	10	35	80.16	82	83			48	14.7	12.6	10.5	9.11	8.30	7.72	0.43	
CG1-100R1	100	100					40	100.20	102	103	10	10	20	58	21.9	19.0	16.0	13.9	12.7	11.9	0.66	
CG1-120R1	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 The worm wheel is shifted to fit the mounting distance.

[NOTE 1] Allowable torque based on worm speed (rpm).

Bronze Worm Wheels & Gray Iron Worm Wheels

J Series



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

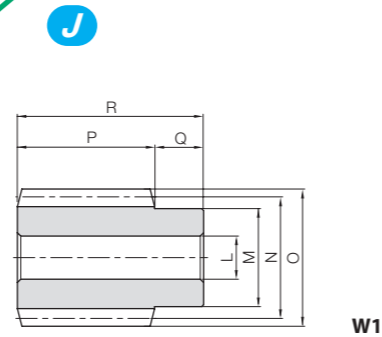
Bore H7	* The product shapes of J Series items are identified by background color.											
	6	8	10	12	14	15	16	17	18	19	20	22
Keyway J _{S9}	—		4×1.8			5×2.3			6×2.8			
Screw size	—		4×1.8			5×2.3			6×2.8			
Catalog Number	M4	M5	M4			M5						
BG1-20R1 J BORE												
BG1-20R2 J BORE												
BG1-30R1 J BORE												
BG1-30R2 J BORE												
BG1-40R1 J BORE												
BG1-50R1 J BORE												
BG1.25-20R1 J BORE												
BG1.25-20R2 J BORE												
BG1.25-50R1 J BORE												
CG1-60R1 J BORE												
CG1-80R1 J BORE												
CG1-100R1 J BORE												
CG1-120R1 J BORE												

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



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

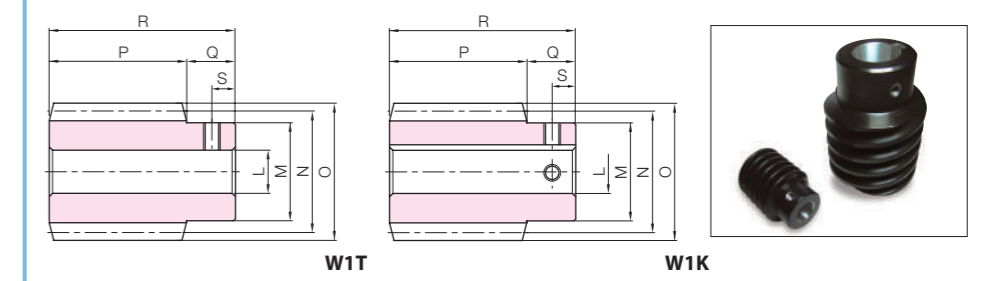
* The precision grade of J Series products is equivalent to the value shown in the table.



Catalog Number ● : J Series (Available-on-request)	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7}	M						
SW1.5-R1 ● SW1.5-R1J8 ● SW1.5-R1J10	m1.5	1	3°26'	R	W1	8	20	25	28	30	10	—	
W1T					8								
SW1.5-R2 ● SW1.5-R2J8 ● SW1.5-R2J10	m1.5	2	6°54'	R	W1	8	20	25	28	30	10	—	
W1T					8								
					W1K	10							

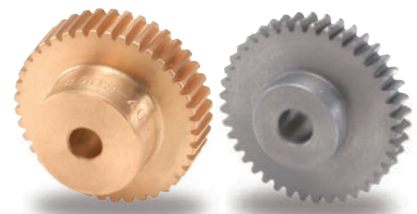
[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

J Series



Total length R	Keyway Width × Depth	Socket head screw		Weight (kg)	Catalog Number ● : J Series (Available-on-request)
		Size	S		
40	—	—	—	0.12	SW1.5-R1
	—	M5	5	0.12	● SW1.5-R1J8
	4 x 1.8	M4	5	0.11	● SW1.5-R1J10
	—	—	—	0.12	SW1.5-R2
	—	M5	5	0.12	● SW1.5-R2J8
	4 x 1.8	M4	5	0.11	● SW1.5-R2J10

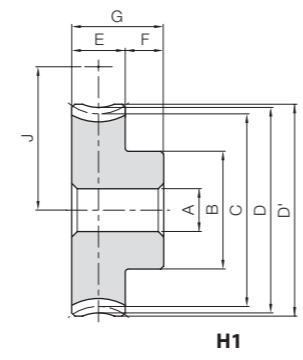
BG/CG Module 1.5
Worm Wheels



Specifications	
Catalog Number	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 (old JIS PBC2) FC200
Heat treatment	—
Tooth hardness	—

* The precision grade of J Series products is equivalent to the value shown in the table.

A _{H7}	Bore
B	Hub dia.
C	Pitch dia.
D	Throat dia.
D'	Outside dia.
E	Face width
F	Hub width
G	Total length
J	Mounting distance



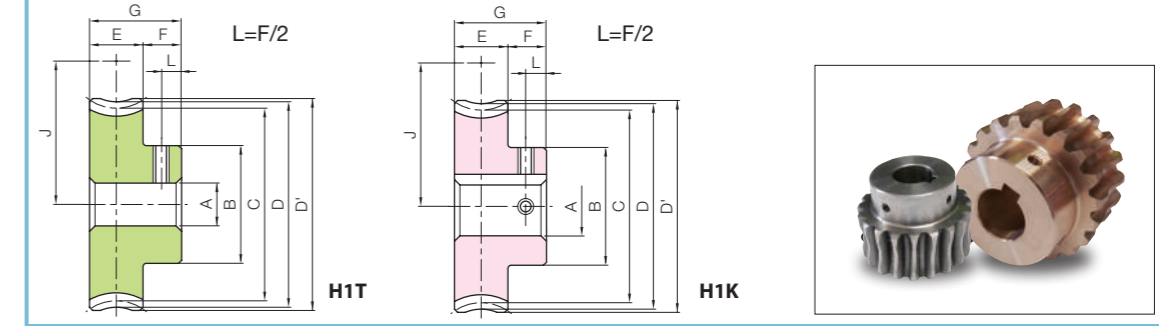
Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A _{H7}	B	C	D	D'	E	F	G	J	Allowable torque (N·m) NOTE 1							Backlash (mm)	Weight (kg)			
															30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm						
BG1.5-20R1	20	20	1	3°26'	R	H1	8	22	30.05	33	34.5	12	22	27.5	4.76	3.96	3.10	2.56	2.27	2.06	0.08~0.26	0.10				
BG1.5-20R2	10	20	2	6°54'			8	22	30.22	33	34.5	12	22	27.5	4.75	3.85	2.89	2.38	2.08	1.87						
BG1.5-30R1	30	30	1	3°26'			10	30	45.08	48	49.5	12	22	35	10.1	8.47	6.72	5.67	5.03	4.55						
BG1.5-30R2	15	30	2	6°54'			10	30	45.33	48	49.5	12	22	35	10.1	8.37	6.40	5.26	4.67	4.20						
BG1.5-40R1	40	40	1	3°26'			12	30	60.11	63	64.5	12	22	42.5	17.2	14.5	11.7	9.96	8.86	8.04						
BG1.5-50R1	50	50	1	3°26'			12	40	75.13	78	79.5	14	24	50	30.4	25.6	20.8	17.8	16.0	14.6						
CG1.5-30R1	30	30					R	H1	10	30	45.08	48	49.5	12	22	35	6.04	5.08	4.03	3.40			3.02	2.73	0.08~0.26	0.18
CG1.5-40R1	40	40	1	3°26'					12	30	60.11	63	64.5	12	22	42.5	10.3	8.71	7.01	5.98			5.31	4.83		
CG1.5-50R1	50	50							12	40	75.13	78	79.5	14	24	50	18.2	15.4	12.5	10.7			9.59	8.74		
CG1.5-60R1	60	60							12	40	90.16	93	94.5	14	24	57.5	25.5	21.6	17.6	15.1			13.7	12.4		

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.

[NOTE 1] Allowable torque based on worm speed (rpm).

Bronze Worm Wheels & Gray Iron Worm Wheels

J Series



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

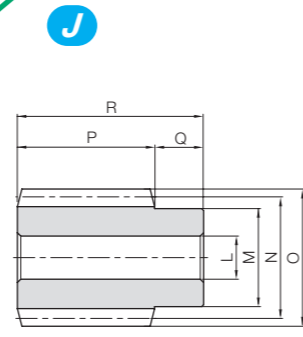
Bore H7	* The product shapes of J Series items are identified by background color.																																									
	8	10	12	14	15	16	17	18	19	20	22	25	28	30																												
Keyway J _{s9}	8			10			12			14			15			16			17			18			19			20			22			25			28			30		
Screw size	—					4x1.8					5x2.3					6x2.8					8x3.3																					
Catalog Number	M5					M4					M5					M6																										
BG1.5-20R1 J BORE	[Color-coded cells]																																									
BG1.5-20R2 J BORE	[Color-coded cells]																																									
BG1.5-30R1 J BORE	[Color-coded cells]																																									
BG1.5-30R2 J BORE	[Color-coded cells]																																									
BG1.5-40R1 J BORE	[Color-coded cells]																																									
BG1.5-50R1 J BORE	[Color-coded cells]																																									
CG1.5-30R1 J BORE	[Color-coded cells]																																									
CG1.5-40R1 J BORE	[Color-coded cells]																																									
CG1.5-50R1 J BORE	[Color-coded cells]																																									
CG1.5-60R1 J BORE	[Color-coded cells]																																									

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



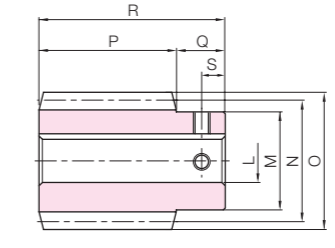
Specifications	
Precision grade	KHK W 001 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating

* The precision grade of J Series products is equivalent to the value shown in the table.



W1

J Series



W1K



Catalog Number ● : J Series (Available-on-request)	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7}	M						
SW2-R1 ● SW2-R1J12 ● SW2-R1J14	m2	1	3°42'	R	W1	12	25	31	35	32	14	—	
W1K					12								
W1K					14								
SW2-R2 ● SW2-R2J12 ● SW2-R2J14		2	7°25'	R	W1	12							
W1K					12								
W1K					14								
SW2-L1 ● SW2-L1J12 ● SW2-L1J14	m2	1	3°42'	L	W1	12							
W1K					12								
W1K					14								
SW2-L2 ● SW2-L2J12 ● SW2-L2J14		2	7°25'	L	W1	12							
W1K					12								
W1K					14								

Total length R	Keyway Width × Depth	Socket head screw Size	S	Weight (kg)	Catalog Number ● : J Series (Available-on-request)	
					SW2-R1 ● SW2-R1J12 ● SW2-R1J14	SW2-R2 ● SW2-R2J12 ● SW2-R2J14
46	—	—	—	0.20	SW2-R1	SW2-L1
	4 × 1.8	M4	7	0.20	● SW2-R1J12	● SW2-L1J12
	5 × 2.3	M4	7	0.18	● SW2-R1J14	● SW2-L1J14
	—	—	—	0.20	SW2-R2	SW2-L2
	4 × 1.8	M4	7	0.20	● SW2-R2J12	● SW2-L2J12
	5 × 2.3	M4	7	0.18	● SW2-R2J14	● SW2-L2J14
	—	—	—	0.20	SW2-L1	SW2-L1
	4 × 1.8	M4	7	0.20	● SW2-L1J12	● SW2-L1J12
	5 × 2.3	M4	7	0.18	● SW2-L1J14	● SW2-L1J14
	—	—	—	0.20	SW2-L2	SW2-L2
	4 × 1.8	M4	7	0.20	● SW2-L2J12	● SW2-L2J12
	5 × 2.3	M4	7	0.18	● SW2-L2J14	● SW2-L2J14

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



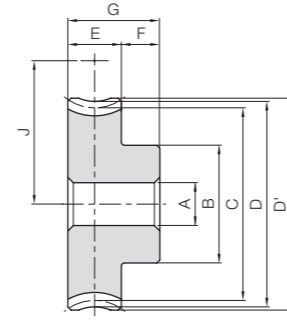
BG/CG Module 2
Worm Wheels



Specifications	
Catalog Number	BG CG
Precision grade	KHK W 002 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'
Material	CAC502 (old JIS PBC2) FC200
Heat treatment	—
Tooth hardness	—

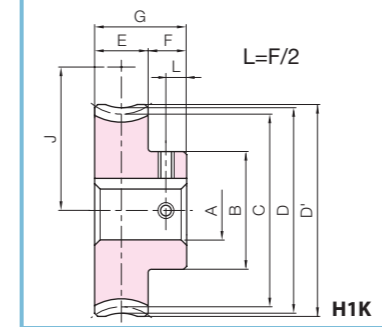
* The precision grade of J Series products is equivalent to the value shown in the table.

A _{H7}	Bore
B	Hub dia.
C	Pitch dia.
D	Throat dia.
D'	Outside dia.
E	Face width
F	Hub width
G	Total length
J	Mounting distance



H1

J Series



H1K

Bronze Worm Wheels & Gray Iron Worm Wheels



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

Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A _{H7}	B	C	D	D'	E	F	G	J	Allowable torque (N·m) <small>NOTE 1</small>						Backlash (mm)	Weight (kg)
															30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm		
															NOTE 1							
BG2-20R1	20	20	1	3°42'	R	12	33	40.08	44	46	22	13	35	35.5	12.3	10.2	8.00	6.59	5.78	5.25	0.10~0.28	0.33
BG2-20R2	10	20	2	7°25'	H1	12	33	40.34	44	46	22	13	35	35.5	12.3	10.0	7.51	6.15	5.32	4.80		
BG2-20L1	20	20	1	3°42'	R	12	33	40.08	44	46	22	13	35	35.5	12.3	10.2	8.00	6.59	5.78	5.25	0.10~0.28	0.33
BG2-20L2	10	20	2	7°25'	L	12	33	40.34	44	46	22	13	35	35.5	12.3	10.0	7.51	6.15	5.32	4.80		
CG2-20R1	20	20	1	3°42'	R	12	33	40.08	44	46	22	13	35	35.5	7.38	6.15	4.80	3.95	3.47	3.15	0.10~0.28	0.27
CG2-20R2	10	20	2	7°25'	H1	12	33	40.34	44	46	22	13	35	35.5	7.40	6.00	4.51	3.69	3.19	2.88		
CG2-30R1	30	30	1	3°42'	R	12	40	60.13	64	66	22	13	35	35.5	15.6	13.1	10.4	8.74	7.70	6.96	0.10~0.28	0.57
CG2-30R2	15	30	2	7°25'	H1	12	40	60.51	64	66	22	13	35	35.5	15.7	13.1	9.96	8.15	7.18	6.45		
CG2-40R1	40	40	1	3°42'	R	12	45	80.17	84	86	22	13	35	35.5	26.7	22.5	18.1	15.4	13.55	12.3	0.10~0.28	0.96
CG2-50R1	50	50	1	3°42'	R	12	48	100.21	104	106	22	13	35	35.5	40.3	34.1	27.6	23.6	21.0	19.1		
CG2-50R2	25	50	2	7°25'	H1	12	48	100.84	104	106	22	13	35	35.5	40.7	34.0	26.9	22.4	19.6	17.8	0.10~0.28	1.44
CG2-60R1	60	60	1	3°42'	R	12	60	120.25	124	126	22	13	35	35.5	56.4	47.9	38.9	33.3	29.9	27.2		
CG2-20L1	20	20	1	3°42'	R	12	33	40.08	44	46	22	13	35	35.5	7.38	6.15	4.80	3.95	3.47	3.15	0.10~0.28	0.27
CG2-20L2	10	20	2	7°25'	H1	12	33	40.34	44	46	22	13	35	35.5	7.40	6.00	4.51	3.69	3.19	2.88		
CG2-30L1	30	30	1	3°42'	R	12	40	60.13	64	66	22	13	35	35.5	15.6	13.1	10.4	8.74	7.70	6.96	0.10~0.28	0.57
CG2-40L1	40	40	1	3°42'	L	12	45	80.17	84	86	22	13	35	35.5	26.7	22.5	18.1	15.4	13.55	12.3		
CG2-50L1	50	50	1	3°42'	R	12	48	100.21	104	106	22	13	35	35.5	40.3	34.1	27.6	23.6	21.0	19.1	0.10~0.28	1.44
CG2-60L1	60	60	1	3°42'	H1	12	60	120.25	124	126	22	13	35	35.5	56.4	47.9	38.9	33.3	29.9	27.2		

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.
[NOTE 1] Allowable torque based on worm speed (rpm).

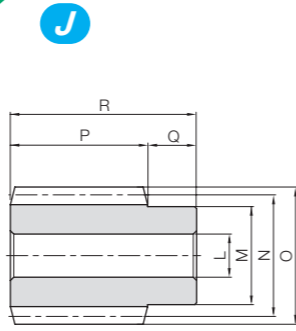
Bore H7	* The product shapes of J Series items are identified by background color.													
	12	14	15	16	17	18	19	20	22	25	28	30	32	35
Keyway JS9	12	14	15	16	17	18	19	20	22	25	28	30	32	35
Screw size	4x1.8	5x2.3			6x2.8			8x3.3			10x3.3			
Catalog Number	M4				M5				M6			M8		
BG2-20R1 J BORE														
BG2-20R2 J BORE														
BG2-20L1 J BORE														
BG2-20L2 J BORE														
CG2-20R1 J BORE														
CG2-20R2 J BORE														
CG2-30R1 J BORE														
CG2-30R2 J BORE														
CG2-40R1 J BORE														
CG2-50R1 J BORE														
CG2-50R2 J BORE														
CG2-60R1 J BORE														
CG2-20L1 J BORE														
CG2-20L2 J BORE														
CG2-30L1 J BORE														
CG2-40L1 J BORE														
CG2-50L1 J BORE														
CG2-60L1 J BORE														

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



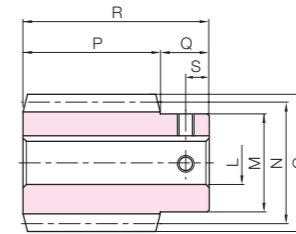
Specifications	
Precision grade	KHK W 001 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating

* The precision grade of J Series products is equivalent to the value shown in the table.



W1

J Series



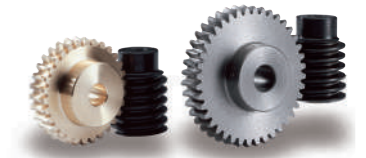
W1K



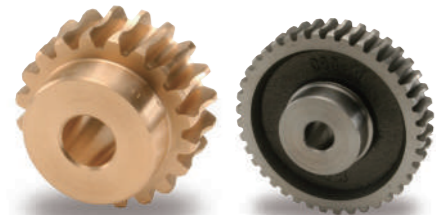
Catalog Number ● : J Series (Available-on-request)	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)		Hub width (left)	
						L _{H7}	M					N	O	P	Q
SW2.5-R1 ● SW2.5-R1J15 ● SW2.5-R1J16 ● SW2.5-R1J17	m2.5	1	3°52'	R	W1	15	30	37	42	45	18	—	—	—	—
W1K					15										
W1K					16										
W1K					17										
SW2.5-R2 ● SW2.5-R2J15 ● SW2.5-R2J16 ● SW2.5-R2J17		2	7°46'	R	W1	15									
W1K					15										
W1K					16										
W1K					17										
SW2.5-L1 ● SW2.5-L1J15 ● SW2.5-L1J16 ● SW2.5-L1J17	1	3°52'	L	W1	15										
W1K				15											
W1K				16											
W1K				17											
SW2.5-L2 ● SW2.5-L2J15 ● SW2.5-L2J16 ● SW2.5-L2J17	2	7°46'	L	W1	15										
W1K				15											
W1K				16											
W1K				17											

Total length R	Keyway Width × Depth	Socket head screw Size	S	Weight (kg)	Catalog Number ● : J Series (Available-on-request)		
					Keyway	Socket head screw	
63	—	—	—	0.39	SW2.5-R1	SW2.5-R1J15	
					SW2.5-R1J16	SW2.5-R1J17	
					SW2.5-R2	SW2.5-R2J15	
					SW2.5-R2J16	SW2.5-R2J17	
	5 × 2.3	M4	9	9	0.39	SW2.5-L1	SW2.5-L1J15
						SW2.5-L1J16	SW2.5-L1J17
						SW2.5-L2	SW2.5-L2J15
						SW2.5-L2J16	SW2.5-L2J17
	5 × 2.3	M4	9	9	0.37	SW2.5-L1	SW2.5-L1J15
						SW2.5-L1J16	SW2.5-L1J17
						SW2.5-L2	SW2.5-L2J15
						SW2.5-L2J16	SW2.5-L2J17
5 × 2.3	M4	9	9	0.36	SW2.5-L1	SW2.5-L1J15	
					SW2.5-L1J16	SW2.5-L1J17	
					SW2.5-L2	SW2.5-L2J15	
					SW2.5-L2J16	SW2.5-L2J17	

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



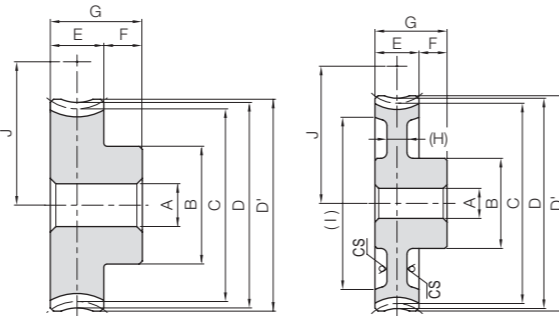
BG/CG Module 2.5
Worm Wheels



Specifications	
Catalog Number	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 (old JIS PBC2) FC200
Heat treatment	—
Tooth hardness	—

* The precision grade of J Series products is equivalent to the value shown in the table.

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

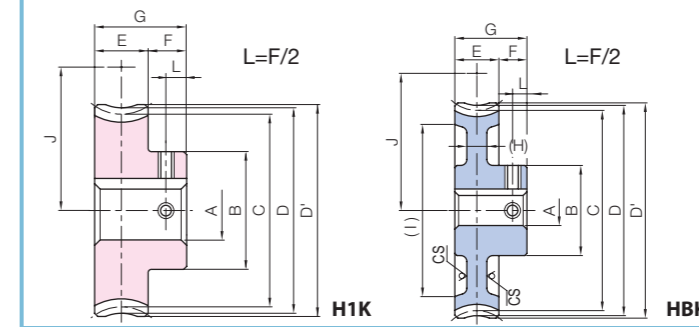


H1

HB

** CS has a forged finish surface.

J Series



H1K

HBK



Bronze Worm Wheels & Gray Iron Worm Wheels

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

Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A _{H7}	B	C	D	D'	E	F	G	(H)	(I)	J	Allowable torque (N·m) <small>NOTE 1</small>						Backlash (mm)	Weight (kg)	
																	30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm			
																	30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm			
BG2.5-20R1	20	10	1	3°52'	R	12	35	50.11	55	57.5	22	14	36	—	—	43.5	21.5	17.7	13.8	11.4	9.94	9.07	0.13~0.31	0.49	
BG2.5-20R2	20	20	2	7°46'	H1	12	35	50.46	55	57.5	22	14	36	—	—	43.5	21.5	17.7	13.8	11.4	9.94	9.07			
BG2.5-20L1	20	10	1	3°52'	L	12	40	75.17	80	82.5	—	—	—	—	—	—	21.5	17.7	13.8	11.4	9.94	9.07	0.13~0.31	1.39	
BG2.5-20L2	20	20	2	7°46'	H1	12	40	75.17	80	82.5	—	—	—	—	—	—	21.5	17.7	13.8	11.4	9.94	9.07			
CG2.5-20R1	20	20	2	7°46'	H1	12	35	50.46	55	57.5	—	—	—	—	—	—	43.5	12.9	10.6	8.30	6.83	5.97	5.44	0.13~0.31	0.40
CG2.5-20R2	20	20	2	7°46'	H1	12	35	50.46	55	57.5	—	—	—	—	—	—	43.5	12.9	10.4	7.78	6.36	5.49	4.96		
CG2.5-30R1	30	30	1	3°52'	R	12	40	75.17	80	82.5	—	—	—	—	—	—	56	27.3	22.8	18.0	15.1	13.2	12.0	0.13~0.31	1.39
CG2.5-40R1	40	40	1	3°52'	R	15	45	100.23	105	107.5	—	—	—	—	—	—	68.5	46.7	39.0	31.3	26.5	23.3	21.2		
CG2.5-50R1	50	50	1	3°52'	HB	15	50	125.29	130	132.5	22	14	36	(9)	(110)	81	70.6	59.0	47.8	40.7	36.1	33.0	30.0	0.13~0.31	1.54
CG2.5-60R1	60	60	1	3°52'	HB	15	55	150.34	155	157.5	—	—	—	—	—	—	93.5	98.8	82.9	67.3	57.6	51.5	47.0		
CG2.5-20L1	20	20	1	3°52'	L	12	35	50.11	55	57.5	—	—	—	—	—	—	43.5	12.9	10.6	8.30	6.83	5.97	5.44	0.13~0.31	0.40
CG2.5-20L2	20	20	2	7°46'	H1	12	35	50.46	55	57.5	—	—	—	—	—	—	43.5	12.9	10.4	7.78	6.36	5.49	4.96		
CG2.5-40L1	40	40	1	3°52'	L	15	45	100.23	105	107.5	—	—	—	—	—	—	68.5	46.7	39.0	31.3	26.5	23.3	21.2	0.13~0.31	1.39
CG2.5-40L2	40	40	1	3°52'	L	15	45	100.23	105	107.5	—	—	—	—	—	—	68.5	46.7	39.0	31.3	26.5	23.3	21.2		

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.

[NOTE 1] Allowable torque based on worm speed (rpm).

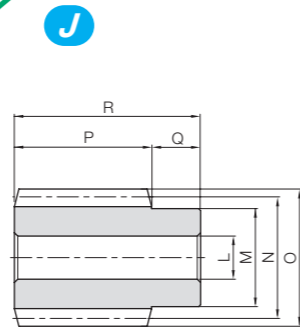
Bore H7	* The product shapes of J Series items are identified by background color.													
	12	14	15	16	17	18	19	20	22	25	28	30	32	35
Keyway J _{s9}	4×1.8		5×2.3				6×2.8				8×3.3		10×3.3	
Screw size	M4				M5				M6		M8			
Catalog Number	M4 M5 M6 M8													
BG2.5-20R1 J BORE														
BG2.5-20R2 J BORE														
BG2.5-20L1 J BORE														
BG2.5-20L2 J BORE														
CG2.5-20R1 J BORE														
CG2.5-20R2 J BORE														
CG2.5-30R1 J BORE														
CG2.5-40R1 J BORE														
CG2.5-50R1 J BORE														
CG2.5-60R1 J BORE														
CG2.5-20L1 J BORE														
CG2.5-20L2 J BORE														
CG2.5-40L1 J BORE														

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



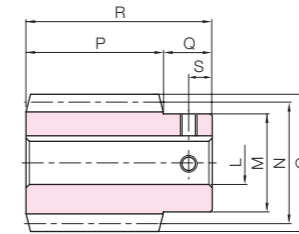
Specifications	
Precision grade	KHK W 001 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating

* The precision grade of J Series products is equivalent to the value shown in the table.



W1

J Series



W1K



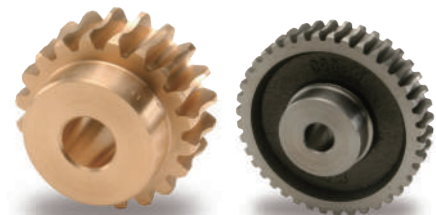
Catalog Number ● J Series (Available-on-request)	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7}	M						
SW3-R1 ● SW3-R1J17 ● SW3-R1J18 ● SW3-R1J19 ● SW3-R1J20	m3	1	3°55'	R	W1	16	35	44	50	50	20	—	
17													
18													
19													
20													
SW3-R2 ● SW3-R2J17 ● SW3-R2J18 ● SW3-R2J19 ● SW3-R2J20		2	7°50'		W1	16							
17													
18													
19													
20													
SW3-L1 ● SW3-L1J17 ● SW3-L1J18 ● SW3-L1J19 ● SW3-L1J20	L	1	3°55'	W1	16								
17													
18													
19													
20													
SW3-L2 ● SW3-L2J17 ● SW3-L2J18 ● SW3-L2J19 ● SW3-L2J20		2	7°50'	W1	16								
17													
18													
19													
20													

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

Total length R	Keyway Width × Depth	Socket head screw		Weight (kg)	Catalog Number ● J Series (Available-on-request)
		Size	S		
70	5 × 2.3	M4	10	0.64	SW3-R1
				0.62	● SW3-R1J17
				0.60	● SW3-R1J18
				0.58	● SW3-R1J19
	6 × 2.8	M5	10	0.56	● SW3-R1J20
				0.64	SW3-R2
				0.62	● SW3-R2J17
				0.60	● SW3-R2J18
	6 × 2.8	M5	10	0.58	● SW3-R2J19
				0.56	● SW3-R2J20
				0.64	SW3-L1
				0.62	● SW3-L1J17
6 × 2.8	M5	10	0.60	● SW3-L1J18	
			0.58	● SW3-L1J19	
			0.56	● SW3-L1J20	
			0.64	SW3-L2	
6 × 2.8	M5	10	0.62	● SW3-L2J17	
			0.60	● SW3-L2J18	
			0.58	● SW3-L2J19	
			0.56	● SW3-L2J20	



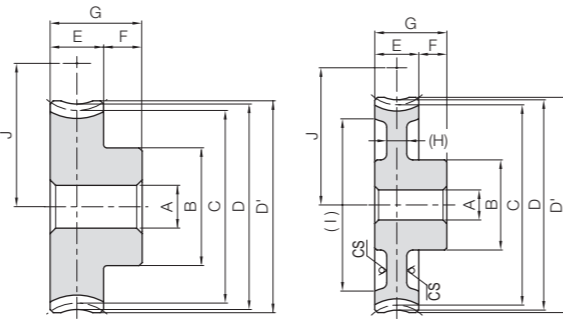
BG/CG Module 3
Worm Wheels



Specifications	
Catalog Number	BG CG
Precision grade	KHK W 002 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'
Material	CAC502 (old JIS PBC2) FC200
Heat treatment	—
Tooth hardness	—

* The precision grade of J Series products is equivalent to the value shown in the table.

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

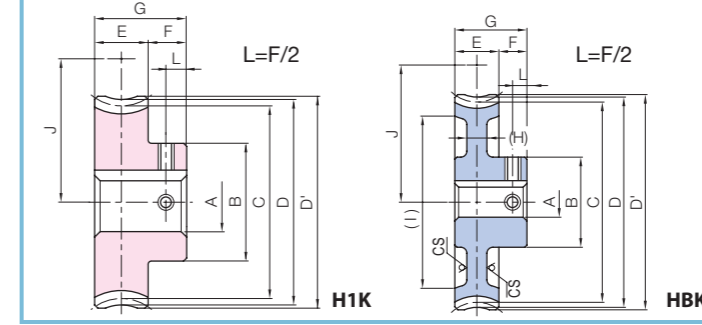


H1

HB

** CS has a forged finish surface.

J Series



H1K

HBK



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

Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A _{H7}	B	C	D	D'	E	F	G	(H)	(I)	J	Allowable torque (N·m) NOTE 1						Backlash (mm)	Weight (kg)						
																	30 rpm								100 rpm					
																	30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm								
BG3-20R1 BG3-20R2	20 10	20	1 2	3°55' 7°50'	R	20	50	60.14 60.57	66	69	28	15	43	—	—	52	36.8 37.0	30.1 29.5	23.5 22.1	19.1 17.9	16.7 15.4	15.2 14.0	0.15~0.33	0.89						
BG3-20L1 BG3-20L2	20 10	20	1 2	3°55' 7°50'	L	20	50	60.14 60.57	66	69	28	15	43	—	—	52	36.8 37.0	30.1 29.5	23.5 22.1	19.1 17.9	16.7 15.4	15.2 14.0	0.15~0.33	0.89						
CG3-20R1 CG3-20R2 CG3-30R1 CG3-30R2	20 10 30 15	20 20 30 15	20 20 30 15	1 2 1 2	3°55' 7°50' 3°55' 7°50'	R	20	50 55 55	60.14 60.57 90.21 90.85	66 66 96 96	69 69 99 99	28	43	—	—	52	22.1 22.2 46.6 47.2	18.1 17.7 38.7 38.5	14.1 13.3 30.6 29.3	11.5 10.7 25.4 23.7	10.0 9.24 22.2 20.8	—	0.15~0.33	0.73 0.73 1.50 1.50						
CG3-40R1 CG3-50R1 CG3-60R1	40 50 60	40 50 60	40 50 60	1 1 1	3°55' 3°55' 3°55'	HB	20	63 70	120.28 150.35 180.42	126 156 186	129 159 189	30	45	(9)	(107) (138) (166)	82 97 112	79.8 121 169	66.3 100 141	53.2 81.1 114	44.6 68.4 96.7	39.1 60.5 86.3	—	0.15~0.33	1.93 2.67 3.58						
CG3-20L1 CG3-20L2 CG3-30L1	20 10 30	20 10 30	20 10 30	1 2 1	3°55' 7°50' 3°55'	L	20	50 50 55	60.14 60.57 90.21	66 66 96	69 69 99	28	43	—	—	52	22.1 22.2 46.6	18.1 17.7 38.7	14.1 13.3 30.6	11.5 10.7 25.4	10.0 9.24 22.2	—	0.15~0.33	0.73 0.73 1.50						
CG3-60L1	60	60	60	1	3°55'	HB	20	70	180.42	186	189	30	45	(9)	(166)	112	169	141	114	96.7	86.3	—	0.15~0.33	3.58						

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.

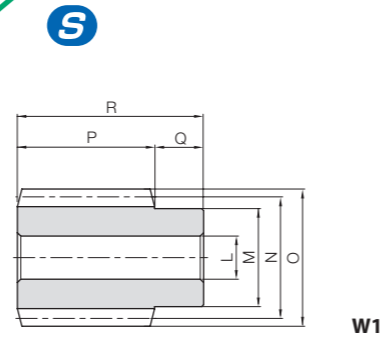
[NOTE 1] Allowable torque based on worm speed (rpm).

Bore H7	* The product shapes of J Series items are identified by background color.							
Keyway JS9	20	22	25	28	30	32	35	40
Screw size	6×2.8			8×3.3			10×3.3	
Catalog Number	M5			M6			M8	
BG3-20R1 J BORE								
BG3-20R2 J BORE								
BG3-20L1 J BORE								
BG3-20L2 J BORE								
CG3-20R1 J BORE								
CG3-20R2 J BORE								
CG3-30R1 J BORE								
CG3-30R2 J BORE								
CG3-40R1 J BORE								
CG3-50R1 J BORE								
CG3-60R1 J BORE								
CG3-20L1 J BORE								
CG3-20L2 J BORE								
CG3-30L1 J BORE								
CG3-60L1 J BORE								

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.



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 (excludes semi-custom products)



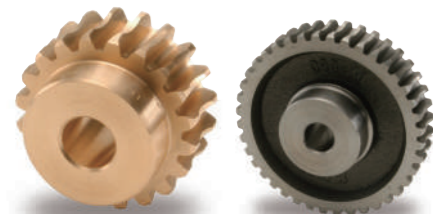
Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7}	M	N	O	P	Q	Q'
SW4-R1 SW4-R2	m4	1 2	3°42' 7°25'	R	W1	22	50	62	70	70	25	—
SW4-L1S SW4-L2S	m4	1 2	3°42' 7°25'	L	W1	22	50	62	70	70	25	—

Total length	Weight (kg)	Catalog Number
R		
95	1.76	SW4-R1 SW4-R2
95	1.76	SW4-L1S SW4-L2S

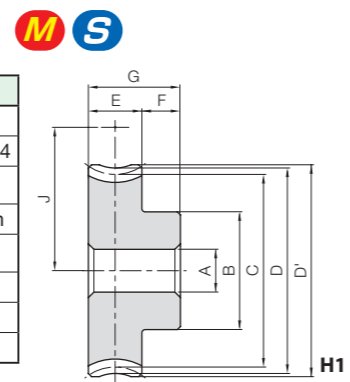
[Caution on Product Characteristics] ① Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

BG/CG Module 4
Worm Wheels **NEW**

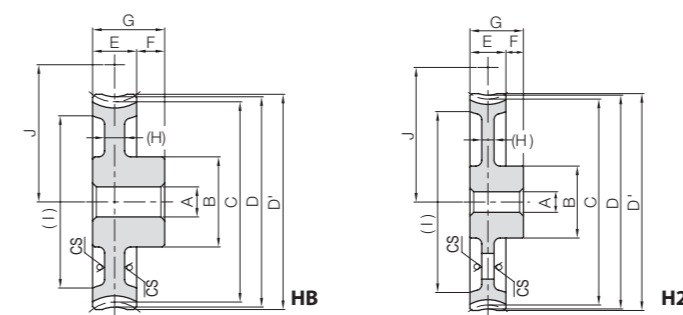
Bronze Worm Wheels & Gray Iron Worm Wheels



Specifications	
Catalog Number	BG CG
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 (old JIS PBC2) FC200
Heat Treatment	— —
Tooth hardness	— —



Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B	C	D	D'	E
BG4-20R1 BG4-20R2	20 10	m4	20	1 2	3°42' 7°25'	R	H1	20	60	80.17 80.67	88	90	35



* CS has a forged finish surface.

Hub width	Total length	Mounting distance	Allowable torque (N·m) <small>NOTE 1</small>						Backlash (mm)	Weight (kg)	Catalog Number
			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}			
17	52	71	75.9 75.9	61.7 60.0	47.9 44.8	38.4 35.7	33.7 30.9	30.1 27.5	0.17~0.37	1.91	BG4-20R1 BG4-20R2

Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B	C	D	D'	E
CG4-20R1	20	m4	20	1	3°42'	R	H1	20	60	80.17	88	90	35
CG4-20R2	10		20	2	7°25'			60	80.67	88	90		
CG4-30R1	30		30	1	3°42'			60	120.25	128	130		
CG4-30R2 (Made to Order)	15	m4	30	2	7°25'	R	H1	20	60	121.01	128	130	35
CG4-40R1	40	m4	40	1	3°42'	R	HB	20	70	160.33	168	171	35
CG4-50R1 CG4-60R1	50 60	m4	50 60	1	3°42'	R	H2	20	70 80	200.42 240.5	208 248	211 251	35
CG4-20L1S CG4-20L2S CG4-30L1S CG4-40L1S CG4-50L1S CG4-60L1S	20 10 30 40 50 60	m4	20 20 30 40 50 60	1 2 1 1 1 1	3°42' 7°25' 3°42' 3°42' 3°42' 3°42'	L	H1	20	60	80.17	88	90	35
60	60		80.67	88	90								
30	60		120.25	128	130								
40	70		160.33	168	171								
50	70		200.42	208	211								
60	80		240.5	248	251								

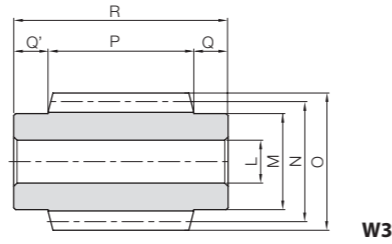
Hub width	Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) <small>NOTE 1</small>				Backlash (mm)	Weight (kg)	Catalog Number
					30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}			
F	G	(H)	(I)	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}			
17	52	—	—	71	45.6	37.0	28.7	23.0	0.17~0.37	1.56	CG4-20R1 CG4-20R2
17	52	—	—	91	96.3	79.1	62.3	50.9	0.17~0.37	3.17	CG4-30R1
17	52	—	—	91	96.8	78.3	59.4	47.3	0.17~0.37	3.17	CG4-30R2 (Made to Order)
17	52	(11)	(136)	111	165	136	108	89.4	0.17~0.37	4.02	CG4-40R1
17	52	(12)	(176)	131	249	205	165	137	0.17~0.37	4.97	CG4-50R1
17	52	(12)	(218)	151	348	288	233	194	0.17~0.37	6.58	CG4-60R1
17	52	—	—	71	45.6	37.0	28.7	23.0	0.17~0.37	1.56	CG4-20L1S
				71	45.5	36.0	26.9	21.4		1.56	CG4-20L2S
				91	96.3	79.1	62.3	50.9		3.17	CG4-30L1S
				111	165	136	108	89.4		5.55	CG4-40L1S
				131	249	205	165	137		8.43	CG4-50L1S
				151	348	288	233	194		12.1	CG4-60L1S

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.
 ② H2 has a long cast hole in the web (H) section.
 ③ Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.
 [Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

[NOTE 1] Allowable torque based on worm speed (rpm).



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 (excludes semi-custom products)



Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width (right)		Hub width (left)	
						L _{H7}	M				N	O	P	Q
SW5-R1	m5	1	4°06'	R	W3	25	56	70	80	85	20	20	20	20
SW5-R2 (Made to Order)	m5	2	8°13'	R	W3	25	56	70	80	85	20	20	20	20
SW5-L1S	m5	1	4°06'	L	W3	25	56	70	80	85	20	20	20	20

Total length	Weight (kg)	Catalog Number
R		
125	2.86	SW5-R1
125	2.86	SW5-R2 (Made to Order)
125	2.86	SW5-L1S

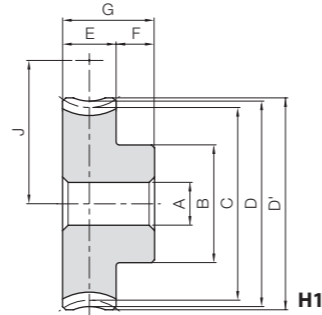
[Caution on Product Characteristics] ① Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

[Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

BG/CG Module 5
Worm Wheels **NEW**



Specifications	
Catalog Number	BG CG
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 (old JIS PBC2) FC200
Heat Treatment	— —
Tooth hardness	— —



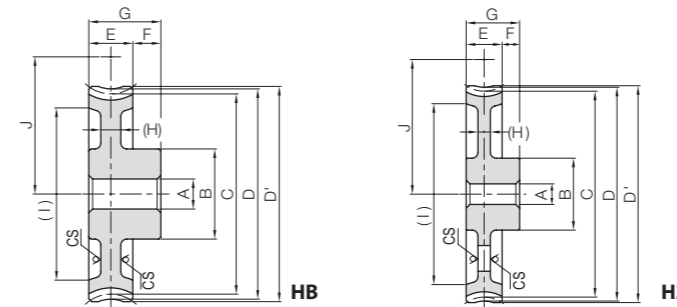
Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
BG5-20R1	20	m5	20	1	4°06'	R	H1	22	75	100.26	110	113	45
BG5-20R2 (Made to Order)	10	m5	20	2	8°13'	R	H1	22	75	101.04	110	113	45

Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
CG5-20R1	20	m5	20	1	4°06'	R	H1	22	75	100.26	110	113	45
CG5-30R1	30		30	1	4°06'	R	HB	22	75	150.38	160	163	45
CG5-30R2 (Made to Order)	15	m5	30	2	8°13'	R	HB	22	75	151.56	160	163	45
CG5-40R1	40	m5	40	1	4°06'	R	H2	22	90	200.51	210	213	45
CG5-50R1	50	m5	50	1	4°06'	R	H2	22	90	250.61	260	263	45
CG5-60R1	60		60					300.77	310	313			
CG5-20L1S	20	m5	20	1	4°06'	L	H1	22	75	100.26	110	113	45
CG5-30L1S	30		30					150.38	160	163			
CG5-40L1S	40		40					200.51	210	213			
CG5-50L1S	50		50					250.64	260	263			
CG5-60L1S	60		60					300.77	310	313			

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.
 ② H2 has a long cast hole in the web (H) section.
 ③ Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.
 ④ For S semi-custom standard products weighing 15 kg or more, eyebolt screw threads (2-M12 depth 25 mm) are machined around the outside of the hub side surface. Details of the PCD of the screw threads are located on page 51.

[Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

Bronze Worm Wheels & Gray Iron Worm Wheels



* CS has a forged finish surface.



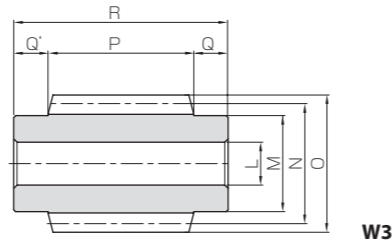
Hub width	Total length	Mounting distance	Allowable torque (N·m) ^{NOTE 1}						Backlash (mm)	Weight (kg)	Catalog Number
			30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
F	G	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
20	65	85	146	117	91.2	73.0	63.7	56.9	0.20~0.40	3.89	BG5-20R1
20	65	85	146	115	85.8	68.4	58.8	52.2	0.20~0.40	3.89	BG5-20R2 (Made to Order)

Hub width	Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) ^{NOTE 1}				Backlash (mm)	Weight (kg)	Catalog Number
					30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}			
F	G	(H)	(I)	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}			
20	65	—	—	85	87.4	70.3	54.7	43.8	0.20~0.40	3.18	CG5-20R1
		(13)	(127)	110	185	150	119	96.8		5.07	CG5-30R1
20	65	(13)	(127)	110	187	150	114	90.6	0.20~0.40	5.07	CG5-30R2 (Made to Order)
20	65	(16)	(172)	135	316	258	206	170	0.20~0.40	7.75	CG5-40R1
		(16)	(223)	160	477	390	315	261		10.1	CG5-50R1
		(14)	(276)	185	668	548	443	369	0.20~0.40	12.3	CG5-60R1
20	65	—	—	85	87.4	70.3	54.7	43.8	0.20~0.40	3.18	CG5-20L1S
				110	185	150	119	96.8		6.44	CG5-30L1S
				135	316	258	206	170		11.3	CG5-40L1S
				160	477	390	315	261		17.1	CG5-50L1S
				185	668	548	443	369		24.4	CG5-60L1S

[NOTE 1] Allowable torque based on worm speed (rpm).



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 (excludes semi-custom products)



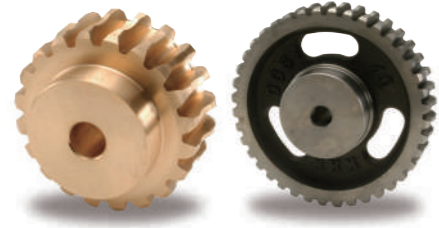
Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width (right)		Hub width (left)	
						L _{H7}	M				N	O	P	Q
SW6-R1	m6	1	4°18'	R	W3	30	64	80	92	100	25	25	25	25
SW6-R2 (Made to Order)	m6	2	8°38'	R	W3	30	64	80	92	100	25	25	25	25
SW6-L1S	m6	1	4°18'	L	W3	30	64	80	92	100	25	25	25	25

Total length	Weight (kg)	Catalog Number
R		
150	4.38	SW6-R1
150	4.38	SW6-R2 (Made to Order)
150	4.38	SW6-L1S

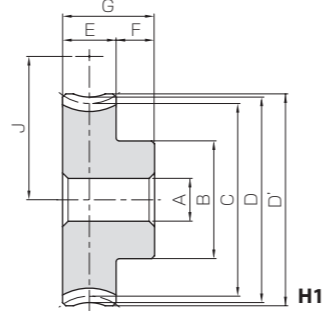
[Caution on Product Characteristics] ① Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

[Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

BG · CG Module 6
Worm Wheels **NEW**



Specifications	
Catalog Number	BG CG
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 (old JIS PBC2) FC200
Heat Treatment	— —
Tooth hardness	— —



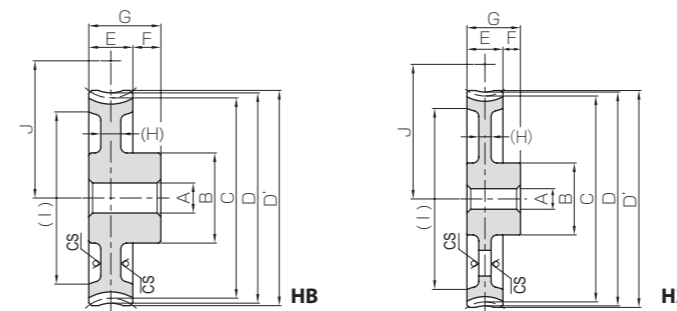
Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
BG6-20R1	20	m6	20	1	4°18'	R	H1	25	100	120.34	132	136	52
BG6-20R2 (Made to Order)	10	m6	20	2	8°38'	R	H1	25	100	121.38	132	136	52

Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width
								A _{H7}	B				
CG6-20R1	20	m6	20	1	4°18'	R	H1	25	100	120.34	132	136	52
CG6-30R1	30												
CG6-40R1	40												
CG6-50R1	50	m6	50	1	4°18'	H2	100	120	300.85	312	316	52	
CG6-60R1	60												
CG6-20L1S	20	m6	20	1	4°18'	L	H1	25	100	120.34	132	136	52
CG6-30L1S	30												
CG6-40L1S	40												
CG6-50L1S	50												
CG6-60L1S	60												

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.
 ② H2 has a long cast hole in the web (H) section.
 ③ Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.
 ④ For S semi-custom standard products weighing 15 kg or more, eyebolt screw threads (2-M12 depth 25 mm) are machined around the outside of the hub side surface. Details of the PCD of the screw threads are located on page 51.

[Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

Bronze Worm Wheels & Gray Iron Worm Wheels



* CS has a forged finish surface.



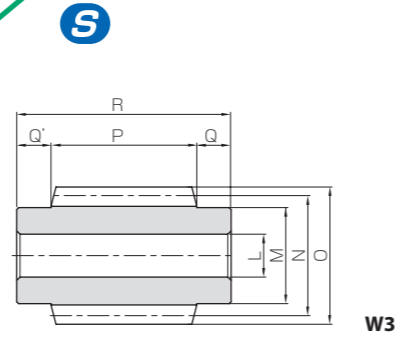
Hub width	Total length	Mounting distance	Allowable torque (N·m) ^{NOTE 1}						Backlash (mm)	Weight (kg)	Catalog Number
			30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
F	G	J	30 _{rpm}	100 _{rpm}	300 _{rpm}	600 _{rpm}	900 _{rpm}	1200 _{rpm}			
20	72	100	232	185	144	115	99.2	88.8	0.22~0.42	6.60	BG6-20R1
20	72	100	235	183	136	109	92.3	82.0	0.22~0.42	6.60	BG6-20R2 (Made to Order)

Hub width	Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) ^{NOTE 1}			Backlash (mm)	Weight (kg)	Catalog Number
					30 _{rpm}	100 _{rpm}	300 _{rpm}			
F	G	(H)	(I)	J	30 _{rpm}	100 _{rpm}	300 _{rpm}			
20	72	—	—	100	139	111	86.2	0.22~0.42	5.39	CG6-20R1
		(15)	(155)	130	294	237	187		8.72	CG6-30R1
		(15)	(213)	160	502	407	325		11.4	CG6-40R1
20	72	(16)	(275)	190	760	615	496	14.5	CG6-50R1	
		(17)	(336)	220	1060	865	698	20.3	CG6-60R1	
		—	—	100	139	111	86.2	5.39	CG6-20L1S	
20	72	—	—	100	139	111	86.2	0.22~0.42	10.8	CG6-30L1S
				130	294	237	187		18.4	CG6-40L1S
				160	502	407	325		28.0	CG6-50L1S
				190	760	615	496		40.3	CG6-60L1S
				220	1060	865	698			

[NOTE 1] Allowable torque based on worm speed (rpm).



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	—



Catalog Number	Normal module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
						L _{H7}	M						
SW8-R1S	m8	1	5°6'	R	W3	30	68	90	106	120	25	5	
SW10-R1S	m10	1	5°44'	R	W3	30	73	100	120	120	25	5	

Total length	Weight (kg)	Catalog Number
R		
150	6.02	SW8-R1S
150	7.55	SW10-R1S

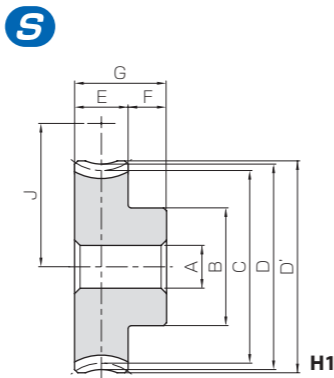
[Caution on Product Characteristics] ① Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

CG Module 8, 10
Worm Wheels **NEW**

Gray Iron Worm Wheels



Specifications	
Precision grade	KHK W 002 grade 4
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	FC200
Heat treatment	—
Tooth hardness	—
Surface treatment	—



Catalog Number	Reduction ratio	Normal module	No. of teeth	No. of starts of mating worm	Lead angle	Direction of helix	Shape	Bore					
								A _{H7}	B	C	D	D'	E
CG8-20R1S	20	m8	20	1	5°06'	R	H1	30	130	160.64	176	180	60
CG8-30R1S	30		30					180	240.95	256	260		
CG8-40R1S	40		40					220	321.27	336	340		
CG8-50R1S	50		40					240	401.59	416	420		
CG10-20R1S	20	m10	20	1	5°44'	R	H1	30	165	201.01	220	225	72
CG10-30R1S	30		50					240	301.51	320	325		
CG10-40R1S	40		50					280	402.02	420	425		

Hub width	Total length	Mounting distance	Allowable torque (N·m) <small>NOTE 1</small>			Backlash (mm)	Weight (kg)	Catalog Number
			30 _{rpm}	100 _{rpm}	300 _{rpm}			
35	95	125	288	230	177	0.27~0.51	12.0	CG8-20R1S
		165	610	492	385			CG8-30R1S
		205	1040	843	669			CG8-40R1S
		245	1580	1280	1020			CG8-50R1S
40	112	150	524	417	320	0.32~0.59	22.8	CG10-20R1S
		200	1110	893	694			CG10-30R1S
		250	1900	1530	1210			CG10-40R1S

[Caution on Product Characteristics] ① The worm wheel is shifted to fit the mounting distance.
 ② Products with S at the end of the catalog number are semi-custom stock products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.
 ③ For S semi-custom standard products weighing 15 kg or more, eyebolt screw threads (2-M12 depth 25 mm) are machined around the outside of the hub side surface. Details of the PCD of the screw threads are located on page 51.

[NOTE 1] Allowable torque based on worm speed (rpm).

