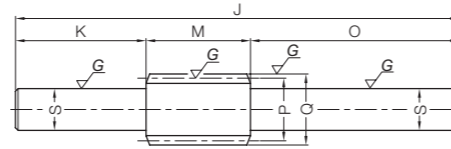




Specifications	
Precision grade	KHK W 001 grade 2
Reference section of gear	Axial direction
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SCM440
Heat treatment	Thermal refined, gear teeth induction hardened*
Tooth hardness	50 to 60HRC



W5

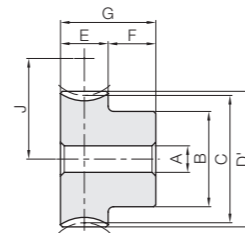
* Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).

Catalog Number	Axial module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Total Length		Neck length (left)	Face width	Neck length (right)	Shaft length (R)	Pitch dia.
						J	K					
KWG0.5-R1	m0.5	1	3°11'	R	W5	65	19	—	12	—	34	9
KWG0.5-R2		2	6°20'			—						
KWG0.8-R1	m0.8	1	3°49'	R	W5	85	25	—	20	—	40	12
KWG0.8-R2		2	7°36'			—						

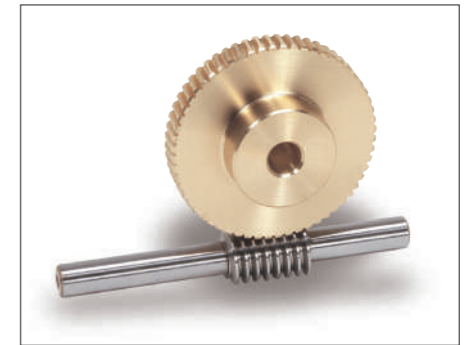
Outside dia.	Neck dia.	Shaft dia.	Grinding length of shaft	Weight (kg)	Catalog Number
Q	R	Sh7	U		
10	—	6	—	0.018	KWG0.5-R1 KWG0.5-R2
13.6	—	8	—	0.043	KWG0.8-R1 KWG0.8-R2



Specifications	
Precision grade	KHK W 002 grade 2
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC702 (old JIS A & BC2)
Heat Treatment	—
Tooth hardness	—



HA



Catalog Number	Reduction ratio	Transverse 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	Hub width
								AH7	B	C	D	D'	E	F
AG0.5-20R1	20	m0.5	20	1	3°11'	R	HA	4	9	10	—	11	5	7
AG0.5-20R2	10		20	2	6°20'			11						
AG0.5-30R1	30		30	1	3°11'			16						
AG0.5-40R1	40		40	1	3°11'			21						
AG0.5-50R1	50		50	1	3°11'			26						
AG0.5-60R1	60		60	1	3°11'			31						
AG0.8-20R1	20	m0.8	20	1	3°49'	R	HA	5	12	16	—	17.6	8	8
AG0.8-20R2	10		20	2	7°36'			17.6						
AG0.8-30R1	30		30	1	3°49'			25.6						
AG0.8-30R2	15		30	2	7°36'			25.6						
AG0.8-40R1	40		40	1	3°49'			33.6						
AG0.8-50R1	50		50	1	3°49'			41.6						
AG0.8-60R1	60		60	1	3°49'			49.6						

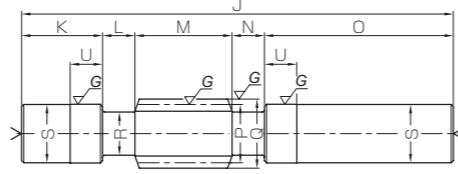
Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) <small>NOTE 1</small>							Backlash (mm)	Weight (kg)	Catalog Number
				30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm	1800 rpm			
G	(H)	(I)	J										
12	—	—	9.5	0.52	0.44	0.36	0.30	0.26	0.24	0.21	0.02~0.12	0.0056	AG0.5-20R1 AG0.5-20R2 AG0.5-30R1 AG0.5-40R1 AG0.5-50R1 AG0.5-60R1
			9.5	0.51	0.42	0.33	0.27	0.24	0.22	0.19		0.0056	
			12	1.09	0.94	0.77	0.65	0.58	0.53	0.48		0.012	
			14.5	1.86	1.60	1.34	1.15	1.02	0.94	0.84		0.020	
			17	2.82	2.42	2.05	1.77	1.58	1.46	1.30		0.035	
16	—	—	14	1.78	1.50	1.21	1.00	0.88	0.82	0.71	0.02~0.12	0.018	AG0.8-20R1 AG0.8-20R2 AG0.8-30R1 AG0.8-30R2 AG0.8-40R1
			14	1.76	1.44	1.11	0.91	0.80	0.74	0.63		0.018	
			18	3.77	3.21	2.62	2.20	1.96	1.81	1.61		0.043	
			18	3.75	3.14	2.46	2.02	1.80	1.65	1.45		0.043	
			22	6.45	5.49	4.55	3.87	3.46	3.19	2.83		0.068	
			26	9.75	8.31	6.94	5.94	5.34	4.96	4.38		0.10	
			30	13.6	11.7	9.77	8.39	7.63	7.05	6.27		0.14	

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



Specifications	
Precision grade	KHK W 001 grade 2
Reference section of gear	Axial direction
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SCM440
Heat treatment	Thermal refined, gear teeth induction hardened*
Tooth hardness	50 to 60HRC
Surface treatment	Black oxide coated except for ground part

* Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).



W6

Catalog Number	Axial module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Total Length		Shaft length (L)		Face width	Neck length (right)		Shaft length (R)	Pitch dia.
						J	K	L	M		N	O		
KWG1-R1 KWG1-R2	m1	1 2	3°35' 7°08'	R	W6	140	35	10	30	10	55	16		
KWG1.5-R1 KWG1.5-R2	m1.5	1 2	3°26' 6°51'	R	W6	190	50	15	40	15	70	25		

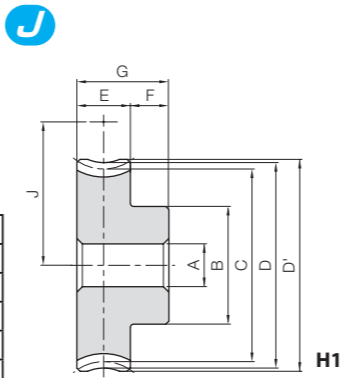
Outside dia.	Neck dia.	Shaft dia.	Grinding length of shaft	Weight (kg)	Catalog Number
Q	R	S	U		
18	13	18.2	20	0.25	KWG1-R1 KWG1-R2
28	21	26.2	20	0.74	KWG1.5-R1 KWG1.5-R2



Specifications	
Precision grade	KHK W 002 grade 2*
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC702 (old JIS A & BC2)
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

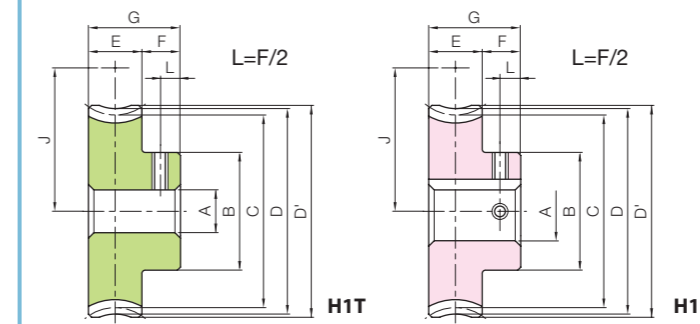


H1

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	1800 rpm						
AG1-20R1	20	20	1	3°35'	R	H1	6	16	20	22	23				18	3.35	2.79	2.23	1.83	1.63	1.50	1.30	0.04~0.14	0.038			
AG1-20R2	10	20	2	7°08'			6	16	20	22	23					18	3.31	2.69	2.06	1.68	1.48	1.35	1.15		0.038		
AG1-30R1	30	30	1	3°35'			6	20	30	32	33					23	7.08	5.98	4.84	4.05	3.63	3.31	2.92		0.078		
AG1-30R2	15	30	2	7°08'			6	20	30	32	33	10	10	20		23	7.03	5.84	4.56	3.72	3.33	3.03	2.63		0.078		
AG1-40R1	40	40	1	3°35'			8	26	40	42	43					28	12.1	10.2	8.43	7.12	6.38	5.86	5.13		0.13		
AG1-50R1	50	50	1	3°35'			8	30	50	52	53					33	18.3	15.5	12.9	10.9	9.87	9.09	7.95		0.20		
AG1-60R1	60	60	1	3°35'			10	35	60	62	63					38	25.6	21.8	18.1	15.4	14.1	12.9	11.4		0.29		
AG1.5-20R1	20	20	1	3°26'			R	H1	8	22	30	33	34.5				27.5	9.84	8.18	6.40	5.30	4.68	4.25	3.68		0.10	
AG1.5-20R2	10	20	2	6°51'					8	22	30	33	34.5					27.5	9.72	7.87	5.92	4.87	4.25	3.83	3.27		0.10
AG1.5-30R1	30	30	1	3°26'					10	30	45	48	49.5					35	20.8	17.5	13.9	11.7	10.4	9.40	8.28		0.22
AG1.5-30R2	15	30	2	6°51'					10	30	45	48	49.5	14	10	24		35	20.7	17.1	13.1	10.8	9.56	8.58	7.46		0.22
AG1.5-40R1	40	40	1	3°26'					12	35	60	63	64.5					42.5	35.6	30.0	24.2	20.6	18.3	16.6	14.6		0.37
AG1.5-50R1	50	50	1	3°26'	12	45			75	78	79.5					50	53.8	45.4	36.9	31.6	28.3	25.8	22.6		0.59		
AG1.5-60R1	60	60	1	3°26'	12	50			90	93	94.5					57.5	75.3	63.8	51.9	44.7	40.4	36.7	32.4		0.83		

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

J Series



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

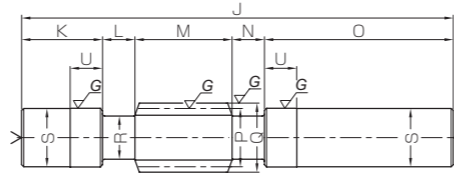
Bore H7	* The product shapes of J Series items are identified by background color.															
	6	8	10	12	14	15	16	17	18	19	20	22	25	28	30	
Keyway JS9	—		4x1.8		5x2.3				6x2.8				8x3.3			
Screw size	—		4x1.8		5x2.3				6x2.8				8x3.3			
Catalog Number	M4	M5	M4				M5				M6					
AG1-20R1 J BORE																
AG1-20R2 J BORE																
AG1-30R1 J BORE																
AG1-30R2 J BORE																
AG1-40R1 J BORE																
AG1-50R1 J BORE																
AG1-60R1 J BORE																
AG1.5-20R1 J BORE																
AG1.5-20R2 J BORE																
AG1.5-30R1 J BORE																
AG1.5-30R2 J BORE																
AG1.5-40R1 J BORE																
AG1.5-50R1 J BORE																
AG1.5-60R1 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 2
Reference section of gear	Axial direction
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SCM440
Heat treatment	Thermal refined, gear teeth induction hardened*
Tooth hardness	50 to 60HRC
Surface treatment	Black oxide coated except for ground part

* Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).



W6

* For products not categorized in our KHK Stock Gear series, custom gear production services with short lead times are available. Please see Page 26 for more details about custom-made orders.

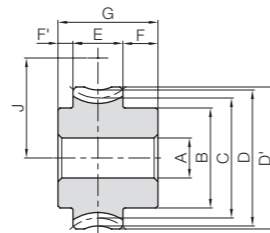
Catalog Number	Axial module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Total Length		Neck length (left)	Face width	Neck length (right)	Shaft length (R)	Pitch dia.
						J	K					
KWG2-R1	m2	1	5°12'	R	W6	200	35	25	40	25	75	22
KWG2-R2		2	10°18'			250	50	27	46	27	100	30
KWG2.5-R1	m2.5	1	4°46'	R	W6	250	50	27	46	27	100	30
KWG2.5-R2		2	9°28'			250	50	27	46	27	100	30

Outside dia.	Neck dia.	Shaft dia.	Grinding length of shaft	Weight (kg)	Catalog Number
Q	R	S	U		
26	17	25.2	20	0.64	KWG2-R1 KWG2-R2
35	23	30.2	20	1.27	KWG2.5-R1 KWG2.5-R2

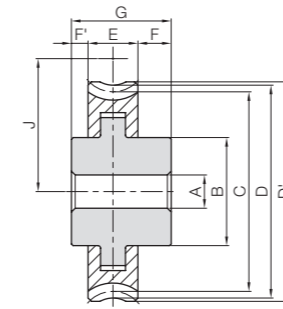


Specifications	
Precision grade	KHK W 002 grade 2
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC702 (old JIS A & BC2) *
Heat treatment	—
Tooth hardness	—

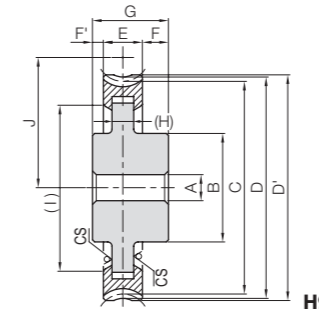
* The hub material of H8 and H9 is FC200.



H6



H8



H9

* CS has a forged finish surface.



Catalog Number	Reduction ratio	Transverse module	No. of teeth	No. of starts of mating worm	Profile shift coefficient	Lead angle	Direction of helix	Shape	Bore		Pitch dia.		Throat dia.		Outside dia.		Face width	Hub width (right)	Hub width (left)
									A _{H7}	B	C	D	D'	E	F	F'			
AGF2-20R1	20	m2	20	1	-0.5	5°12'	R	H6	12	32	40	42	44	18	12	5	E	F	F'
AGF2-20R2	10		20	2	-0.5	10°18'													
AGF2-30R1	30		30	1	-0.5	5°12'													
AGF2-30R2	15		30	2	-0.5	10°18'													
AGF2-36R1	36		36	1	0	5°12'													
AGF2-40R1	40		40	1	-0.5	5°12'													
AGF2-50R1	50	50	1	-0.5	5°12'	H9													
AGF2-60R1	60	60	1	-0.5	5°12'	H9													
AGF2.5-20R1	20	m2.5	20	1	0	4°46'	R	H6	12	35	50	55	57.5	20	15	5	E	F	F'
AGF2.5-20R2	10		20	2	9°28'														
AGF2.5-30R1	30		30	1	4°46'														
AGF2.5-30R2	15		30	2	9°28'														
AGF2.5-40R1	40		40	1	4°46'														
AGF2.5-50R1	50		50	1	4°46'	H9													
AGF2.5-60R1	60	60	1	4°46'	H9														

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	900 rpm	1200 rpm	1800 rpm				
G	(H)	(I)	J											
35	—	—	30	19.4	16.1	12.8	10.5	9.30	8.49	7.31	0.06~0.16	0.25	AGF2-20R1	
			30	19.9	16.1	12.2	9.99	8.75	7.92	6.74			AGF2-20R2	
			40	41.1	34.5	27.7	23.2	20.7	18.8	16.4			AGF2-30R1	
			40	42.3	35.0	27.0	22.1	19.9	17.7	15.4			AGF2-30R2	
			47	57.8	48.6	39.3	33.2	29.6	27.0	23.6			AGF2-36R1	
40	—	—	50	70.3	59.2	48.1	40.7	36.4	33.2	28.9	0.06~0.16	0.85	AGF2-40R1	
			60	106	89.5	73.4	62.5	56.2	51.5	44.9			AGF2-50R1	
			70	149	126	103	88.4	80.3	73.3	64.2			AGF2-60R1	
			40	35.1	29.0	22.6	18.6	16.3	14.8	12.8			AGF2.5-20R1	
			40	34.6	27.9	20.9	17.1	14.8	13.4	11.3			AGF2.5-20R2	
40	—	—	40	74.1	62.0	49.1	41.2	36.7	32.8	28.7	0.06~0.16	0.87	AGF2.5-30R1	
			52.5	73.6	60.6	46.2	37.8	33.2	29.9	25.8			AGF2.5-30R2	
			52.5	73.6	60.6	46.2	37.8	33.2	29.9	25.8			AGF2.5-30R2	
			65	127	106	85.4	72.4	63.7	57.9	50.5			AGF2.5-40R1	
			(13)	192	161	130	111	98.4	90.0	78.3			AGF2.5-50R1	
(13)	268	226	183	157	141	128	112	2.59	AGF2.5-60R1					

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

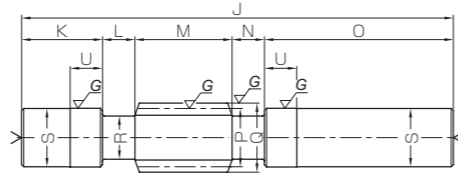


Ground Worm Shafts



Specifications	
Precision grade	KHK W 001 grade 2
Reference section of gear	Axial direction
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SCM440
Heat treatment	Thermal refined, gear teeth induction hardened*
Tooth hardness	50 to 60HRC
Surface treatment	Black oxide coated except for ground part

* Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).



W6

* For products not categorized in our KHK Stock Gear series, custom gear production services with short lead times are available. Please see Page 26 for more details about custom-made orders.

Catalog Number	Axial module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Total Length		Shaft length (L)	Neck length (left)	Face width	Neck length (right)	Shaft length (R)	Pitch dia.
						J	K						
KWG3-R1	m3	1	4°31'	R	W6	300	55	30	60	30	125	38	
KWG3-R2		2	8°58'										
KWG4-R1	m4	1	5°43'	R	W6	360	70	32.5	75	32.5	150	40	
KWG4-R2		2	11°19'										

Outside dia.	Neck dia.	Shaft dia.	Grinding length of shaft	Weight (kg)	Catalog Number
Q	R	S	U		
44	30	40.2	25	2.66	KWG3-R1 KWG3-R2
48	29	45.2	25	3.85	KWG4-R1 KWG4-R2

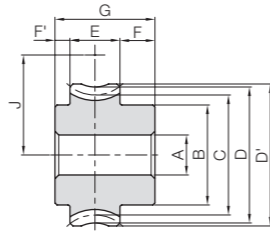


Worm Wheels

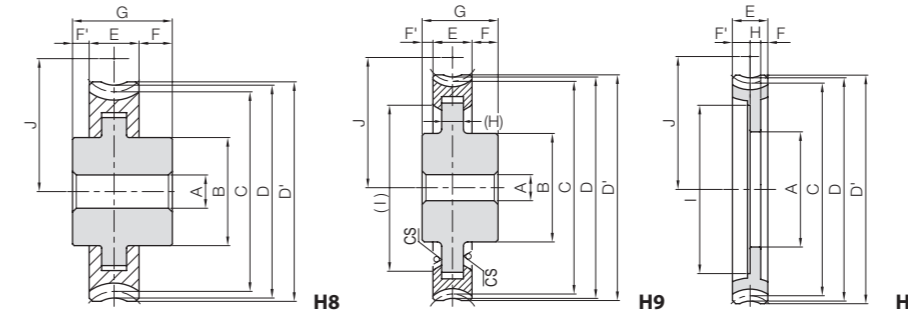


Specifications	
Precision grade	KHK W 002 grade 2
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC702 (old JIS A & BC2) *
Heat treatment	—
Tooth hardness	—

* The hub material of H8 and H9 is FC200.



H6



* CS has a forged finish surface.



Catalog Number	Reduction ratio	Transverse module	No. of teeth	No. of starts of mating worm	Profile shift coefficient	Lead angle	Direction of helix	Shape	Bore	Hub dia.	Pitch dia.	Throat dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)	
									A _{H7}	B	C	D	D'	E	F	F'	
AGF3-20R1	20	m3	20	1	+0.333	4°31'	R	H6	20	50	60	68	71	25	17.5	7.5	
AGF3-20R2	10		20	2	+0.333	8°58'											
AGF3-25R1	25		25	1	0	4°31'											
AGF3-30R1	30		30	1	+0.333	4°31'											
AGF3-40R1	40		40	1	+0.333	4°31'											
AGF3-50R1	50	m3	50	1	+0.333	4°31'	H9	20	75	150	158	161	25	17.5	7.5		
AGF3-60R1	60		60														
AGF4-20R1	20	m4	20	1	0	5°43'	R	H6	20	60	80	88	92	30	20	10	
AGF4-20R2	10		20			2											11°19'
AGF4-25R1	25		25			1											5°43'
AGF4-30R1	30		30			1											5°43'
AGF4-30R2	15		30			2											11°19'
AGF4-40R1	40		40			1											5°43'
AGF4-50R1	50	50	H9	20	90		200	208	212	20	10						
AGF4-60R1	60	60	H0	160	—		240	248	252	7	15						

[Caution on Product Characteristics] ① For H0 products with bore of φ 190 or larger, the bore tolerance is H8.

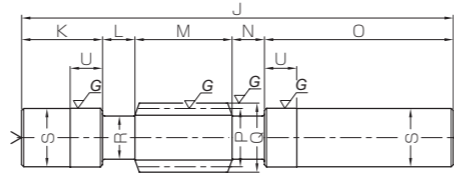
Total length	Web thickness	Web O.D.	Mounting distance	Allowable torque (N·m) <small>NOTE 1</small>								Backlash (mm)	Weight (kg)	Catalog Number
				30 rpm	100 rpm	300 rpm	600 rpm	900 rpm	1200 rpm	1800 rpm				
50	—	—	J	50	59.7	49.1	38.3	31.5	27.5	25.1	21.5	0.06~0.16	0.88	AGF3-20R1
				50	60.2	48.2	36.1	29.5	25.4	23.0	19.4			
				56.5	90.2	74.3	58.8	48.9	42.6	39.0	33.5			
				65	126	105	83.1	69.6	61.0	55.4	48.2			
60	—	—	J	80	216	180	145	122	108	98.0	84.9	0.06~0.16	3.62	AGF3-50R1
				95	326	272	220	188	166	152	132			
				110	457	383	310	265	237	217	188			
				60	123	101	78.8	64.6	56.3	51.5	43.8			
60	—	—	J	60	127	101	76.0	61.9	53.2	48.3	40.5	0.06~0.16	1.77	AGF4-20R2
				70	186	153	121	100	87.3	79.9	68.5			
				80	260	216	171	143	125	114	98.4			
				80	260	216	171	143	125	114	98.4			
				80	270	220	168	137	120	108	92.2			
				60	(20)	(128)	100	445	370	297	251			
60	(20)	(168)	120	673	560	454	385	340	312	269				
30	8	204	140	941	788	638	544	486	444	385	3.60	AGF4-60R1		

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



Specifications	
Precision grade	KHK W 001 grade 2
Reference section of gear	Axial direction
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SCM440
Heat treatment	Thermal refined, gear teeth induction hardened*
Tooth hardness	50 to 60HRC
Surface treatment	Black oxide coated except for ground part

* Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).

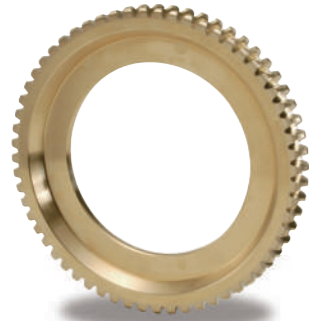


W6

Catalog Number	Axial module	Number of Starts	Nominal lead angle	Direction of helix	Shape	Total Length		Neck length (left)	Face width	Neck length (right)	Shaft length (R)	Pitch dia.
						J	K					
KWG5-R1	m5	1	5°43'	R	W6	400	75	30	90	30	175	50
KWG6-R1	m6	1	5°43'	R	W6	400	60	40	100	40	160	60

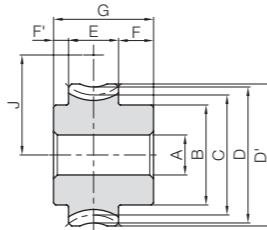
* For products not categorized in our KHK Stock Gear series, custom gear production services with short lead times are available. Please see Page 26 for more details about custom-made orders.

Outside dia.	Neck dia.	Shaft dia.	Grinding length of shaft	Weight (kg)	Catalog Number
Q	R	S	U		
60	36	50.2	30	5.75	KWG5-R1
72	44	60.2	30	8.09	KWG6-R1

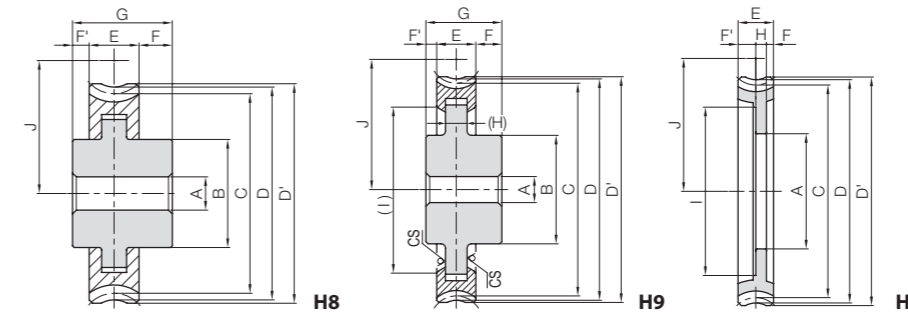


Specifications	
Precision grade	KHK W 002 grade 2
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	CAC702 (old JIS A & BC2) *
Heat treatment	—
Tooth hardness	—

* The hub material of H8 and H9 is FC200.



H6



* CS has a forged finish surface.



Catalog Number	Reduction ratio	Transverse module	No. of teeth	No. of starts of mating worm	Profile shift coefficient	Lead angle	Direction of helix	Shape	Bore		Pitch dia.	Throat dia.	Outside dia.	Face width	Hub width (right)	Hub width (left)
									AH7	B						
AGF5-20R1	20	m5	20	1	0	5°43'	R	H6	75	100	110	115	35	23	12	
AGF5-30R1	30		75						150	160	165					
AGF5-40R1	40		110						200	210	215					
AGF5-50R1	50		250						260	265						
AGF5-60R1	60		300						310	315						
								H0	150	—	—	—	7.5	17.5		
AGF6-20R1	20	m6	20	1	0	5°43'	R	H6	85	120	132	138	40	23	12	
AGF6-30R1	30		100						180	192	198					
AGF6-40R1	40		240						252	258						
AGF6-50R1	50		300						312	318						
AGF6-60R1	60		360						372	378						
								H0	130	—	—	—	8	20		
									190	—	—	—	—	—	—	
									250	—	—	—	—	—	—	
									310	—	—	—	—	—	—	

[Caution on Product Characteristics] ① For H0 products with bore of φ 190 or larger, the bore tolerance is H8.

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	900 rpm	1200 rpm				1800 rpm
70	—	—	75	211	172	134	108	95.0	86.2	72.7	0.07~0.19	3.26	AGF5-20R1
				446	369	291	239	211	191	164			
35	10	(26)	125	763	632	506	421	371	337	288	5.28	6.48	AGF5-30R1
				956	772	646	574	523	446				
75	—	—	90	329	268	208	167	146	131	110	0.07~0.19	4.95	AGF5-40R1
				696	572	451	368	325	290	248			
40	12	190	150	1190	981	784	648	572	513	436	8.00	10.0	AGF5-50R1
				1800	1480	1200	994	885	796	676			
				2520	2090	1680	1410	1260	1130	969			AGF5-60R1

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