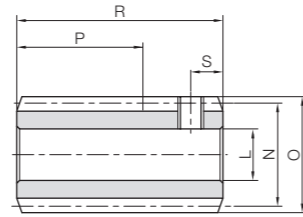




# Stainless Steel Worms



Specifications	
Precision grade	KHK W 001 grade 4
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SUS303
Heat treatment	—
Tooth hardness	(less than 187HB)



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	Total length
						L <sub>H8</sub>	M	N	O	P	Q	R
SUW0.5-R1	m0.5	1	2°36'	R	W2	5	—	11	12	(10)	—	18
SUW0.5-R2		2	5°13'									
SUW0.8-R1	m0.8	1	3°17'	R	W2	6	—	14	15.6	(18)	—	30
SUW0.8-R2		2	6°34'									

Socket head screw		Weight (kg)	Catalog Number
Size	S		
M3	3	0.011 0.010	SUW0.5-R1 SUW0.5-R2
M4	5	0.029	SUW0.8-R1 SUW0.8-R2



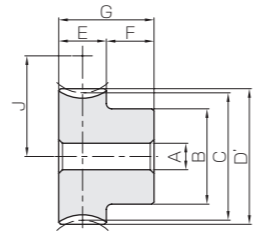
# Worm Wheels *Additional*

## Plastic Worm Wheels



Specifications	
Precision grade	KHK W 002 grade 5 *
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	—

\* The precision grade is equivalent to the value shown in the table.



HA

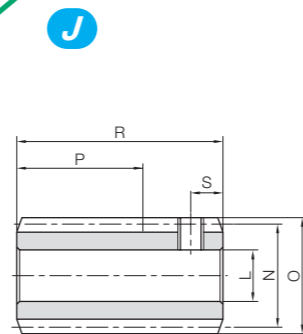
Catalog Number	Normal module	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A	B	C	D	D'	E	
							$-0.05$ $-0.10$						
PG0.5-20R1	m0.5	20	20	1	2°36'	R	HA	4	9	10.01	—	11	5
PG0.5-20R2								4	9	10.04		11	
PG0.5-30R1								4	12	15.02		16	
PG0.5-30R2								4	12	15.06		16	
PG0.5-40R1								5	15	20.02		21	
PG0.5-50R1								5	20	25.03		26	
PG0.5-60R1	5	25	30.03	31									
PG0.8-20R1	m0.8	20	20	1	3°17'	R	HA	5	12	16.03	—	17.6	9
PG0.8-20R2								5	12	16.11		17.6	
PG0.8-30R1								5	18	24.04		25.6	
PG0.8-30R2								5	18	24.16		25.6	
PG0.8-40R1								6	20	32.05		33.6	
PG0.8-50R1								8	25	40.07		41.6	
PG0.8-60R1	8	25	48.08	49.6									

F	G	J	Allowable torque (N-m)	Allowable torque (kgf-m)	Backlash (mm)	Weight (kg)	Catalog Number
			Bending strength	Bending strength			
7	12	10.5	0.077	0.0078	0.09~0.17	0.83	PG0.5-20R1
		10.5	0.077	0.0078		0.83	PG0.5-20R2
		13	0.13	0.013		1.82	PG0.5-30R1
		13	0.13	0.013		1.82	PG0.5-30R2
		15.5	0.19	0.019		3.06	PG0.5-40R1
		18	0.24	0.025		5.24	PG0.5-50R1
9	18	20.5	0.31	0.031	0.13~0.23	7.96	PG0.5-60R1
		15	0.35	0.036		3.06	PG0.8-20R1
		15	0.36	0.036		3.06	PG0.8-20R2
		19	0.59	0.060		7.27	PG0.8-30R1
		19	0.60	0.061		7.27	PG0.8-30R2
		23	0.86	0.087		11.51	PG0.8-40R1
27	31	1.13	0.12	17.76	PG0.8-50R1		
		1.41	0.14	23.67	PG0.8-60R1		



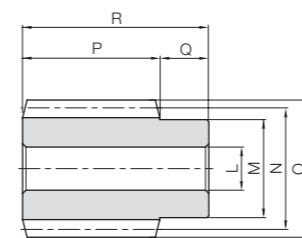
Specifications	
Precision grade	KHK W 001 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	SUS303
Heat treatment	—
Tooth hardness	(less than 187HB)

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



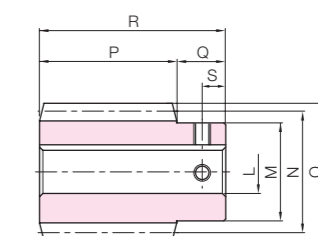
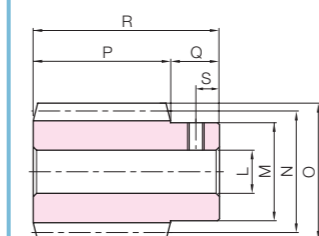
W2

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	Total length
						L <sub>H7(H8)</sub>						
SUW1-R1 SUW1-R2	m1	1 2	3°35' 7°11'	R	W2 W2	6 <sup>H8</sup>	—	16	18	(20)	—	32
SUW1.5-R1 ● SUW1.5-R1J8 ● SUW1.5-R1J10	m1.5	1	3°26'	R	W1 W1T W1K	8 8 10	20	25	28	30	10	40
SUW1.5-R2 ● SUW1.5-R2J8 ● SUW1.5-R2J10		2	6°54'		W1 W1T W1K	8 8 10						



W1

J Series



W1K

Keyway Width x Depth	Socket head screw Size	S	Weight (kg)	Catalog Number ● : J Series (Available-on-request)	
				Worm	Pinion
—	M4	5	0.043	SUW1-R1 SUW1-R2	
—	—	—	0.13	SUW1.5-R1	
—	M5	5	0.13	● SUW1.5-R1J8	
4 x 1.8	M4	5	0.11	● SUW1.5-R1J10	
—	—	—	0.13	SUW1.5-R2	
—	M5	5	0.13	● SUW1.5-R2J8	
4 x 1.8	M4	5	0.11	● SUW1.5-R2J10	

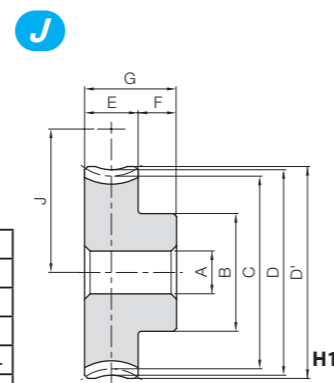


PG Module 1, 1.5  
Worm Wheels



Specifications	
Precision grade	KHK W 002 grade 5*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	—

\* The precision grade is equivalent to the value shown in the table.

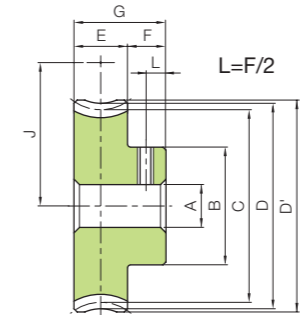


H1

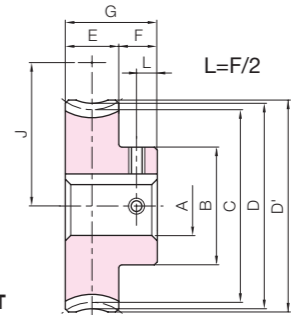
A	Bore
B	Hub dia.
C	Pitch dia.
D	Throat dia.
D'	Outside dia.
E	Face width
F	Hub width
G	Total length
J	Mounting distance

Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A <sub>H8</sub>	B	C	D	D'	E	F	G	J	Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)
PG1-20R1	20	20	1	3°35'		6	16	20.04	22	23				18	0.62	0.060		0.0058
PG1-20R2	10	20	2	7°11'		6	16	20.16	22	23				18	0.62	0.060		0.0058
PG1-30R1	30	30	1	3°35'	R	6	20	30.06	32	33	10	10	20	23	1.03	0.10	0~0.28	0.012
PG1-40R1	40	40	1	3°35'		8	26	40.08	42	43				28	1.49	0.15		0.021
PG1-50R1	50	50	1	3°35'		8	30	50.1	52	53				33	1.96	0.20		0.031
PG1.5-20R1	20	20	1	3°26'	R	8	22	30.05	33	34.5	12	10	22	27.5	1.66	0.17	0~0.30	0.014
PG1.5-20R2	10	20	2	6°54'		8	22	30.22	33	34.5				27.5	1.68			

J Series



H1T



H1K



Plastic Worm Wheels

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

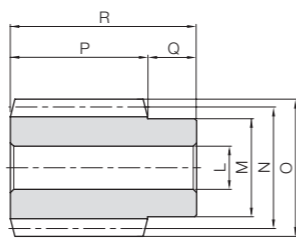
Bore	* The product shapes of J Series items are identified by background color.							
	6	8	10	12	14	15	16	17
Keyway J <sub>59</sub>	—							
Screw size	—			4x1.8		5x2.3		
Catalog Number	M4	M5	M4					
PG1-20R1 J BORE	H1T							
PG1-20R2 J BORE	H1T							
PG1-30R1 J BORE	H1T	H1T						
PG1-40R1 J BORE		H1T	H1K	H1K				
PG1-50R1 J BORE		H1T	H1K	H1K	H1K	H1K	H1K	H1K
PG1.5-20R1 J BORE		H1T	H1K					
PG1.5-20R2 J BORE		H1T	H1K					

\* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance Poly Ether Ether Ketone (PEEK) also has quality properties. A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.



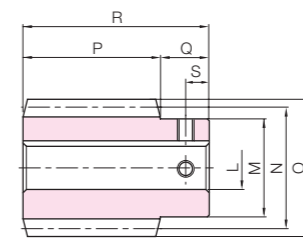
Specifications	
Precision grade	KHK W 001 grade 4*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'**
Material	SUS303
Heat treatment	—
Tooth hardness	(less than 187HB)

\* The precision grade of J Series products is equivalent to the value shown in the table.  
\*\* The pressure angle of module 2.5 is 20°.



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. M	Pitch dia. N	Outside dia. O	Face width P	Hub width Q	Total length R
						LH7							
SUW2-R1 ● SUW2-R1J12 ● SUW2-R1J14	m2	1	3°42'	R	W1	12	25	31	35	32	14	46	
12													
SUW2-R2 ● SUW2-R2J12 ● SUW2-R2J14	m2	2	7°25'	R	W1	12	30	37	42	45	18	63	
12													
SUW2.5-R1 ● SUW2.5-R1J15 ● SUW2.5-R1J16 ● SUW2.5-R1J17	m2.5	1	3°52'	R	W1	15	35	44	50	50	20	70	
15													
SUW2.5-R2 ● SUW2.5-R2J15 ● SUW2.5-R2J16 ● SUW2.5-R2J17	m2.5	2	7°46'	R	W1	15	35	44	50	50	20	70	
15													
SUW3-R1 ● SUW3-R1J17 ● SUW3-R1J18 ● SUW3-R1J19 ● SUW3-R1J20	m3	1	3°55'	R	W1	16	35	44	50	50	20	70	
16													
SUW3-R2 ● SUW3-R2J17 ● SUW3-R2J18 ● SUW3-R2J19 ● SUW3-R2J20	m3	2	7°50'	R	W1	16	35	44	50	50	20	70	
16													

Keyway Width x Depth	Socket head screw Size	S	Weight (kg)	Catalog Number ● : J Series (Available-on-request)	
				Worm	Worm Gear
—	—	—	0.20	SUW2-R1	SUW2-R1J12
4 x 1.8	M4	7	0.20	● SUW2-R1J12	● SUW2-R1J14
5 x 2.3	M4	7	0.18		
—	—	—	0.20	SUW2-R2	SUW2-R2J12
4 x 1.8	M4	7	0.20	● SUW2-R2J12	● SUW2-R2J14
5 x 2.3	M4	7	0.18		
—	—	—	0.40	SUW2.5-R1	SUW2.5-R1J15
5 x 2.3	M4	9	0.39	● SUW2.5-R1J15	● SUW2.5-R1J16
5 x 2.3	M4	9	0.38	● SUW2.5-R1J16	● SUW2.5-R1J17
5 x 2.3	M4	9	0.36		
—	—	—	0.40	SUW2.5-R2	SUW2.5-R2J15
5 x 2.3	M4	9	0.39	● SUW2.5-R2J15	● SUW2.5-R2J16
5 x 2.3	M4	9	0.38	● SUW2.5-R2J16	● SUW2.5-R2J17
5 x 2.3	M4	9	0.36		
—	—	—	0.64	SUW3-R1	SUW3-R1J17
5 x 2.3	M4	10	0.62	● SUW3-R1J17	● SUW3-R1J18
6 x 2.8	M5	10	0.60	● SUW3-R1J18	● SUW3-R1J19
6 x 2.8	M5	10	0.59	● SUW3-R1J19	● SUW3-R1J20
6 x 2.8	M5	10	0.57		
—	—	—	0.64	SUW3-R2	SUW3-R2J17
5 x 2.3	M4	10	0.62	● SUW3-R2J17	● SUW3-R2J18
6 x 2.8	M5	10	0.60	● SUW3-R2J18	● SUW3-R2J19
6 x 2.8	M5	10	0.59	● SUW3-R2J19	● SUW3-R2J20
6 x 2.8	M5	10	0.57		



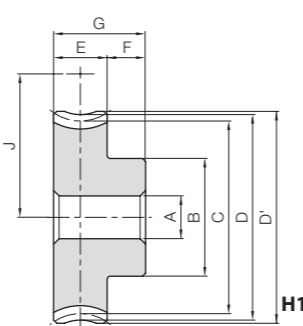
[Cautions on Secondary Operations Series] ① Secondary operations series include the J Series, F Series, R Series, E Series, Hardened Plus, Hardened Plus J Series, Semi-custom Products, and Semi-custom J Series.  
② Because products are machined upon order receipt, cancellation is not possible. For lead times and allowable order sizes, see the Delivery Date Guide on Page 38.

PG Module 2, 2.5, 3  
Worm Wheels



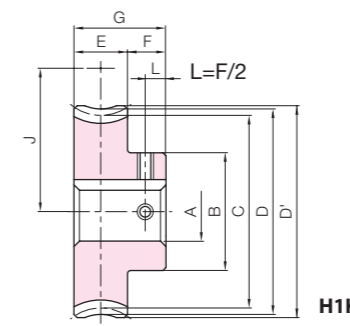
Specifications	
Precision grade	KHK W 002 grade 5*
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	14°30'**
Material	MC901
Heat treatment	—
Tooth hardness	—

\* The precision grade is equivalent to the value shown in the table.  
\*\* The pressure angle of module 2.5 is 20°.



H1

J Series



H1K

Plastic Worm Wheels



Catalog Number	Reduction ratio	No. of teeth	No. of starts of mating worm	Lead angle helix direction	Shape	A±0.05	B	C	D	D'	E	F	G	J	Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)
PG2-20R1	20	20	1	3°42'	R	H1	10	33	40.08	44	22	13	35	35.5	4.78	0.49	0~0.33	0.046
PG2-20R2	10	20	2	7°25'	R	H1	10	33	40.34	44	22	13	35	35.5	4.82	0.49	0~0.33	0.046
PG2.5-20R1	20	20	1	3°52'	R	H1	12	35	50.11	55	22	14	36	43.5	(8.46)	0.86	0~0.36	0.066
PG2.5-20R2	10	20	2	7°46'	R	H1	12	35	50.46	55	22	14	36	43.5	(8.54)	0.87	0~0.36	0.066
PG3-20R1	20	20	1	3°55'	R	H1	15	50	60.14	66	28	15	43	52	(13.7)	1.40	0~0.38	0.13
PG3-20R2	10	20	2	7°50'	R	H1	15	50	60.57	66	28	15	43	52	(13.8)	1.41	0~0.38	0.13

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

Bore	* The product shapes of J Series items are identified by background color.															
	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	M4				M5				M6							
Catalog Number	H1K	H1K	H1K	H1K	H1K	H1K										
PG2-20R1 J BORE	H1K	H1K	H1K	H1K	H1K	H1K										
PG2-20R2 J BORE	H1K	H1K	H1K	H1K	H1K	H1K										
PG2.5-20R1 J BORE		H1K	H1K	H1K	H1K	H1K	H1K	H1K								
PG2.5-20R2 J BORE		H1K	H1K	H1K	H1K	H1K	H1K	H1K								
PG3-20R1 J BORE				H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K			
PG3-20R2 J BORE				H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K	H1K			