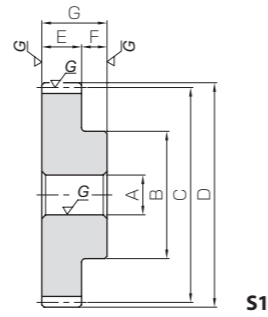


Specifications	
Precision grade	JIS grade N6 (JIS B1702-1: 1998) *
Reference section of gear	Rotating plane
Gear teeth	Standard full depth
Transverse pressure angle	20°
Helix angle	21°30'
Material	SCM440
Heat treatment	Thermal refined, tooth surface induction hardened
Tooth hardness	50 ~ 60HRC
Surface treatment	Black oxide coated except for ground part

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



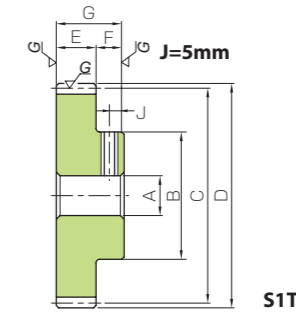
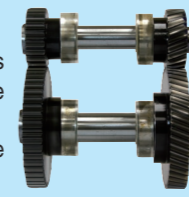
S1

J Series

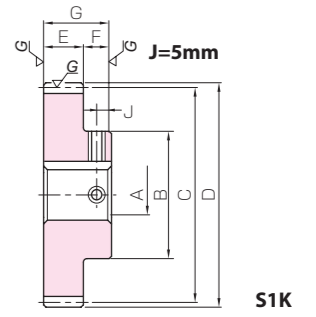
Ground Helical Gears

Drop in Replacements for Spur Gears

KKHG ground helical gears use a "transverse" module. The assembly distance is the same as spur gear pairs with the same module and number of teeth. Improved strength and low noise: Take the next step up from spur gears.



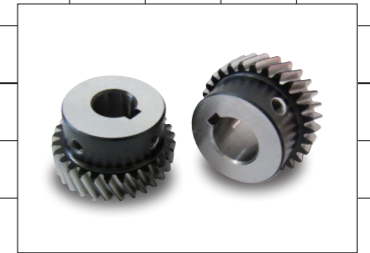
S1T



S1K

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	—		4 x 1.8				5 x 2.3				6 x 2.8				8 x 3.3	
Screw size	—		M4				M5				M5		M6		M6	
Catalog No.	M4	M5	M4				M5				M5		M6		M6	
KKHG1-20R J BORE	S1T															
KKHG1-20L J BORE	S1T															
KKHG1-22R J BORE		S1T														
KKHG1-22L J BORE		S1T														
KKHG1-24R J BORE		S1T														
KKHG1-24L J BORE		S1T														
KKHG1-28R J BORE		S1T														
KKHG1-28L J BORE		S1T														
KKHG1-30R J BORE			S1K	S1K												
KKHG1-30L J BORE			S1K	S1K												
KKHG1-32R J BORE			S1K	S1K												
KKHG1-32L J BORE			S1K	S1K												
KKHG1-35R J BORE			S1K	S1K												
KKHG1-35L J BORE			S1K	S1K												
KKHG1-36R J BORE			S1K	S1K												
KKHG1-36L J BORE			S1K	S1K												
KKHG1-40R J BORE			S1K	S1K	S1K	S1K	S1K	S1K								
KKHG1-40L J BORE			S1K	S1K	S1K	S1K	S1K	S1K								
KKHG1-48R J BORE			S1K	S1K	S1K	S1K	S1K	S1K								
KKHG1-48L J BORE			S1K	S1K	S1K	S1K	S1K	S1K								
KKHG1-50R J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K						
KKHG1-50L J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K						
KKHG1-60R J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
KKHG1-60L J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
KKHG1-70R J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
KKHG1-70L J BORE				S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
KKHG1-90R J BORE					S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
KKHG1-90L J BORE					S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
KKHG1-100R J BORE						S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
KKHG1-100L J BORE						S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	



Catalog No.	No. of teeth	Direction of helix	Shape	Bore				Pitch dia.	Outside dia.	Face width	Hub width	Total Length	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)				
				A _{H7}	B	C	D						Bending strength	Surface durability	Bending strength	Surface durability						
KKHG1-20R KKHG1-20L	20	R L	S1	6	17	20	22	8	10	18	7.79	4.98	0.79	0.51	0.08~0.16	0.034						
KKHG1-22R KKHG1-22L	22	R L	S1	8	18	22	24										8.92	6.14	0.91	0.63	0.08~0.16	0.037
KKHG1-24R KKHG1-24L	24	R L	S1	8	20	24	26										10.1	7.43	1.03	0.76	0.08~0.16	0.046
KKHG1-28R KKHG1-28L	28	R L	S1	8	20	28	30										12.4	10.4	1.27	1.06	0.08~0.16	0.056
KKHG1-30R KKHG1-30L	30	R L	S1	10	25	30	32										13.6	12.1	1.39	1.23	0.08~0.16	0.072
KKHG1-32R KKHG1-32L	32	R L	S1	10	25	32	34										13.5	12.6	1.37	1.29	0.08~0.16	0.078
KKHG1-35R KKHG1-35L	35	R L	S1	10	25	35	37										15.1	15.4	1.54	1.57	0.08~0.16	0.088
KKHG1-36R KKHG1-36L	36	R L	S1	10	25	36	38										15.7	16.3	1.60	1.67	0.08~0.16	0.091
KKHG1-40R KKHG1-40L	40	R L	S1	10	30	40	42										17.9	20.5	1.83	2.10	0.08~0.16	0.12
KKHG1-48R KKHG1-48L	48	R L	S1	10	30	48	50										22.5	30.5	2.29	3.11	0.08~0.16	0.16
KKHG1-50R KKHG1-50L	50	R L	S1	12	35	50	52	23.6	33.3	2.41	3.40	0.08~0.16	0.18									
KKHG1-60R KKHG1-60L	60	R L	S1	12	40	60	62	29.3	49.4	2.99	5.04	0.10~0.18	0.26									
KKHG1-70R KKG1-70L	70	R L	S1	12	40	70	72	35.2	68.9	3.58	7.02	0.10~0.18	0.32									
KKHG1-90R KKHG1-90L	90	R L	S1	15	50	90	92	46.9	118	4.78	12.1	0.10~0.18	0.53									
KKHG1-100R KKHG1-100L	100	R L	S1	15	50	100	102	50.4	142	5.14	14.5	0.10~0.18	0.62									

- [Caution on Product Characteristics]
- The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see Page 164 for more details.
 - The backlash values shown in the table are the theoretical values for the backlash in the normal direction of a pair of identical gears in mesh.
 - These gears produce axial thrust forces. See Page 167 for more details.
 - Right handed and left handed helical gears in the same module are designed to mesh as a pair, but KHG gears are not interchangeable with KSSH type helical gears.

- [Caution on Secondary Operations]
- Please read "Caution on Performing Secondary Operations" (Page 166) when performing modifications and/or secondary operations for safety concerns.
 - 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).
 - While cutting off the entire hub may cause curvature deformation by residual stress, some products are straightened and annealed after refining the material.

- [Caution on J series]
- As available-on-request products, requires a lead-time for shipping within **2 working-days (excludes the day ordered)**, after placing an order. Please allow additional shipping time to get to your local distributor.
 - Number of products we can process for one order is **1 to 20 units**. For quantities of 21 or more pieces, we need to quote price and lead time.
 - Keyways are made according to JIS B1301 standards, Js 9 tolerance.
 - Certain products which would otherwise have a very long tapped hole are counterbored to reduce the length of the tap.
 - Areas of products which have been re-worked will not be black oxide coated.
 - For products having a tapped hole, a set screw is included.
 - When using S1T set screws for fastening gears to a shaft, only use this method for applications with light load usage. For secure fastening, please use dowel pins in combination.