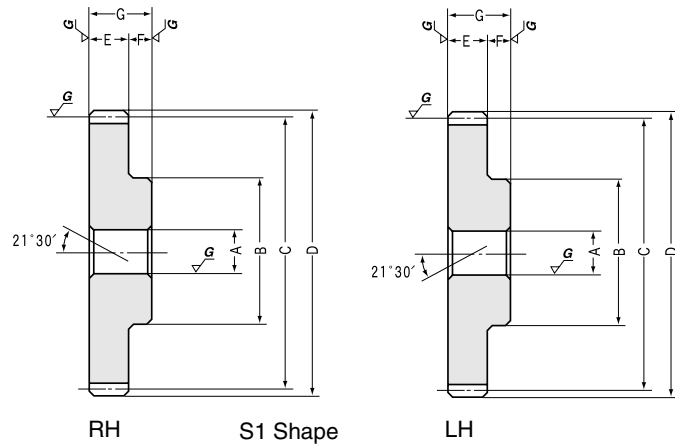




KHG Ground Helical Gears Transverse Module 1

Helical Gears
GPK



Module 1

Catalog No.	Direction of Helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width <small>NOTE 1</small>	Hub width	Total length
		<i>m</i>	<i>z</i>	A _{H7}	B	C	D	E	F	G
KHG1- 20R KHG1- 20L	R L	1	20	6	17	20	22	8	10	18
KHG1- 22R KHG1- 22L	R L	1	22	8	18	22	24	8	10	18
KHG1- 24R KHG1- 24L	R L	1	24	8	20	24	26	8	10	18
KHG1- 25R KHG1- 25L	R L	1	25	8	20	25	27	8	10	18
KHG1- 28R KHG1- 28L	R L	1	28	8	20	28	30	8	10	18
KHG1- 30R KHG1- 30L	R L	1	30	10	25	30	32	8	10	18
KHG1- 32R KHG1- 32L	R L	1	32	10	25	32	34	8	10	18
KHG1- 35R KHG1- 35L	R L	1	35	10	25	35	37	8	10	18
KHG1- 36R KHG1- 36L	R L	1	36	10	25	36	38	8	10	18
KHG1- 40R KHG1- 40L	R L	1	40	10	30	40	42	8	10	18
KHG1- 44R KHG1- 44L	R L	1	44	10	30	44	46	8	10	18
KHG1- 45R KHG1- 45L	R L	1	45	10	30	45	47	8	10	18
KHG1- 48R KHG1- 48L	R L	1	48	10	30	48	50	8	10	18
KHG1- 50R KHG1- 50L	R L	1	50	12	35	50	52	8	10	18
KHG1- 60R KHG1- 60L	R L	1	60	12	40	60	62	8	10	18
KHG1- 70R KHG1- 70L	R L	1	70	12	40	70	72	8	10	18
KHG1- 80R KHG1- 80L	R L	1	80	15	50	80	82	8	10	18
KHG1- 90R KHG1- 90L	R L	1	90	15	50	90	92	8	10	18
KHG1-100R KHG1-100L	R L	1	100	15	50	100	102	8	10	18

CAUTION: Right handed and left handed helical gears of the same module are designed to mesh as a pair, but they are not interchangeable with SH type helical gears.
NOTE 1: It is possible to perform secondary operations except on the gear teeth. We recommend that you avoid shortening the hub which will lead to the deformation of the gears.



Specifications

Precision grade	JIS N6 grade (JIS B1702-1: 1996) OLD JIS 2 grade (JIS B1702: 1976)	Heat treatment	Thermal refined, tooth surfaces induction hardened
Reference section of gear	Rotating plane	Tooth hardness	50~55HRC
Gear teeth	Standard full depth	Surface treatment	Black oxide except ground surfaces
Transverse pressure angle	20°	Tooth surface finish	Ground
Helix angle	21°30'	Datum reference surface for gear grinding	Bore
Material	SCM440	Secondary Operations	Possible except tooth area

Shape	Allowable torque (N·m) <small>NOTE 2</small>		Allowable torque (kgf·m)		Backlash (mm) <small>NOTE 3</small>	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	7.785	4.978	(0.7939)	(0.5076)	0.08 ~ 0.16	0.03	KHG1- 20R KHG1- 20L
S1	8.92	6.139	(0.9096)	(0.626)	0.08 ~ 0.16	0.04	KHG1- 22R KHG1- 22L
S1	10.07	7.429	(1.027)	(0.7576)	0.08 ~ 0.16	0.05	KHG1- 24R KHG1- 24L
S1	10.66	8.123	(1.087)	(0.8283)	0.08 ~ 0.16	0.05	KHG1- 25R KHG1- 25L
S1	12.42	10.39	(1.267)	(1.06)	0.08 ~ 0.16	0.06	KHG1- 28R KHG1- 28L
S1	13.62	12.08	(1.389)	(1.232)	0.08 ~ 0.16	0.07	KHG1- 30R KHG1- 30L
S1	13.47	12.63	(1.374)	(1.288)	0.08 ~ 0.16	0.08	KHG1- 32R KHG1- 32L
S1	15.13	15.36	(1.543)	(1.566)	0.08 ~ 0.16	0.09	KHG1- 35R KHG1- 35L
S1	15.68	16.34	(1.599)	(1.666)	0.08 ~ 0.16	0.09	KHG1- 36R KHG1- 36L
S1	17.93	20.54	(1.828)	(2.095)	0.08 ~ 0.16	0.12	KHG1- 40R KHG1- 40L
S1	20.18	25.26	(2.058)	(2.576)	0.08 ~ 0.16	0.14	KHG1- 44R KHG1- 44L
S1	20.74	26.53	(2.115)	(2.705)	0.08 ~ 0.16	0.14	KHG1- 45R KHG1- 45L
S1	22.46	30.51	(2.29)	(3.111)	0.08 ~ 0.16	0.16	KHG1- 48R KHG1- 48L
S1	23.59	33.32	(2.406)	(3.398)	0.08 ~ 0.16	0.18	KHG1- 50R KHG1- 50L
S1	29.34	49.4	(2.992)	(5.037)	0.1 ~ 0.18	0.26	KHG1- 60R KHG1- 60L
S1	35.15	68.85	(3.584)	(7.021)	0.1 ~ 0.18	0.32	KHG1- 70R KHG1- 70L
S1	40.99	91.78	(4.18)	(9.359)	0.1 ~ 0.18	0.44	KHG1- 80R KHG1- 80L
S1	46.86	118.3	(4.778)	(12.06)	0.1 ~ 0.18	0.53	KHG1- 90R KHG1- 90L
S1	50.44	141.9	(5.144)	(14.47)	0.1 ~ 0.18	0.62	KHG1-100R KHG1-100L

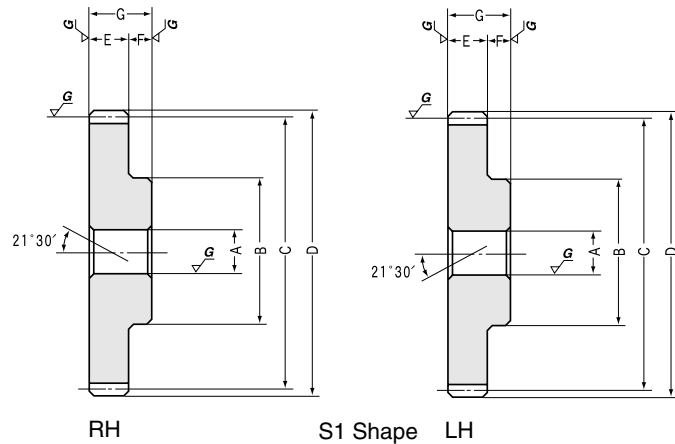
NOTE 2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions.
Please see page 131 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



KHG Ground Helical Gears Transverse Module 1.5

Helical Gears
GTR



Module 1.5

Catalog No.	Direction of Helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width <small>NOTE 1</small>	Hub width	Total length
		<i>m</i>	<i>z</i>	A _{H7}	B	C	D	E	F	G
KHG1.5- 20R KHG1.5- 20L	R L	1.5	20	12	24	30	33	12	12	24
KHG1.5- 22R KHG1.5- 22L	R L	1.5	22	12	26	33	36	12	12	24
KHG1.5- 24R KHG1.5- 24L	R L	1.5	24	12	28	36	39	12	12	24
KHG1.5- 25R KHG1.5- 25L	R L	1.5	25	12	30	37.5	40.5	12	12	24
KHG1.5- 26R KHG1.5- 26L	R L	1.5	26	12	32	39	42	12	12	24
KHG1.5- 28R KHG1.5- 28L	R L	1.5	28	15	36	42	45	12	12	24
KHG1.5- 30R KHG1.5- 30L	R L	1.5	30	15	38	45	48	12	12	24
KHG1.5- 32R KHG1.5- 32L	R L	1.5	32	15	40	48	51	12	12	24
KHG1.5- 35R KHG1.5- 35L	R L	1.5	35	15	42	52.5	55.5	12	12	24
KHG1.5- 36R KHG1.5- 36L	R L	1.5	36	15	45	54	57	12	12	24
KHG1.5- 40R KHG1.5- 40L	R L	1.5	40	15	50	60	63	12	12	24
KHG1.5- 44R KHG1.5- 44L	R L	1.5	44	15	50	66	69	12	12	24
KHG1.5- 45R KHG1.5- 45L	R L	1.5	45	18	50	67.5	70.5	12	12	24
KHG1.5- 48R KHG1.5- 48L	R L	1.5	48	18	50	72	75	12	12	24
KHG1.5- 50R KHG1.5- 50L	R L	1.5	50	18	60	75	78	12	12	24
KHG1.5- 52R KHG1.5- 52L	R L	1.5	52	18	60	78	81	12	12	24
KHG1.5- 60R KHG1.5- 60L	R L	1.5	60	20	60	90	93	12	12	24
KHG1.5- 70R KHG1.5- 70L	R L	1.5	70	20	60	105	108	12	12	24
KHG1.5- 80R KHG1.5- 80L	R L	1.5	80	20	70	120	123	12	12	24
KHG1.5- 90R KHG1.5- 90L	R L	1.5	90	20	70	135	138	12	12	24
KHG1.5-100R KHG1.5-100L	R L	1.5	100	20	70	150	153	12	12	24

CAUTION: Right handed and left handed helical gears in the same module are designed to mesh as a pair, but they are not interchangeable with SH type helical gears.
NOTE 1: It is possible to perform secondary operations except on the gear teeth. We recommend that you avoid shortening the hub which will lead to the deformation of the gears.



Specifications

Precision grade	JIS N6 grade (JIS B1702-1: 1998) OLD JIS 2 grade (JIS B1702: 1976)	Heat treatment	Thermal refined, tooth surfaces induction hardened
Reference section of gear	Rotating plane	Tooth hardness	50~55HRC
Gear teeth	Standard full depth	Surface treatment	Black oxide except ground surfaces
Transverse pressure angle	20°	Tooth surface finish	Ground
Helix angle	21°30'	Datum reference surface for gear grinding	Bore
Material	SCM440	Secondary Operations	Possible except tooth area

Shape	Allowable torque (N·m) <small>NOTE 2</small>		Allowable torque (kgf·m)		Backlash (mm) <small>NOTE 3</small>	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	26.27	18.53	(2.679)	(1.89)	0.08 ~ 0.16	0.09	KHG1.5- 20R KHG1.5- 20L
S1	27.37	20.83	(2.791)	(2.124)	0.08 ~ 0.16	0.11	KHG1.5- 22R KHG1.5- 22L
S1	30.9	25.3	(3.151)	(2.58)	0.08 ~ 0.16	0.13	KHG1.5- 24R KHG1.5- 24L
S1	32.7	27.71	(3.334)	(2.826)	0.08 ~ 0.16	0.15	KHG1.5- 25R KHG1.5- 25L
S1	34.49	30.24	(3.517)	(3.084)	0.08 ~ 0.16	0.17	KHG1.5- 26R KHG1.5- 26L
S1	38.12	35.67	(3.887)	(3.637)	0.08 ~ 0.16	0.19	KHG1.5- 28R KHG1.5- 28L
S1	41.78	41.57	(4.26)	(4.239)	0.08 ~ 0.16	0.22	KHG1.5- 30R KHG1.5- 30L
S1	45.47	47.96	(4.637)	(4.891)	0.08 ~ 0.16	0.26	KHG1.5- 32R KHG1.5- 32L
S1	51.06	58.47	(5.207)	(5.962)	0.1 ~ 0.18	0.3	KHG1.5- 35R KHG1.5- 35L
S1	52.94	62.22	(5.398)	(6.345)	0.1 ~ 0.18	0.33	KHG1.5- 36R KHG1.5- 36L
S1	60.49	78.49	(6.168)	(8.004)	0.1 ~ 0.18	0.42	KHG1.5- 40R KHG1.5- 40L
S1	68.11	96.79	(6.945)	(9.87)	0.1 ~ 0.18	0.47	KHG1.5- 44R KHG1.5- 44L
S1	70.02	101.7	(7.14)	(10.37)	0.1 ~ 0.18	0.47	KHG1.5- 45R KHG1.5- 45L
S1	75.78	117.2	(7.727)	(11.95)	0.1 ~ 0.18	0.52	KHG1.5- 48R KHG1.5- 48L
S1	79.63	128.2	(8.12)	(13.07)	0.1 ~ 0.18	0.63	KHG1.5- 50R KHG1.5- 50L
S1	83.49	139.6	(8.514)	(14.24)	0.1 ~ 0.18	0.67	KHG1.5- 52R KHG1.5- 52L
S1	99.05	191	(10.1)	(19.48)	0.1 ~ 0.18	0.81	KHG1.5- 60R KHG1.5- 60L
S1	113.5	256	(11.57)	(26.1)	0.12 ~ 0.2	1	KHG1.5- 70R KHG1.5- 70L
S1	132.3	342.7	(13.49)	(34.95)	0.12 ~ 0.2	1.4	KHG1.5- 80R KHG1.5- 80L
S1	151.2	442.3	(15.42)	(45.1)	0.12 ~ 0.2	1.65	KHG1.5- 90R KHG1.5- 90L
S1	170.2	554.4	(17.36)	(56.53)	0.12 ~ 0.2	1.97	KHG1.5-100R KHG1.5-100L

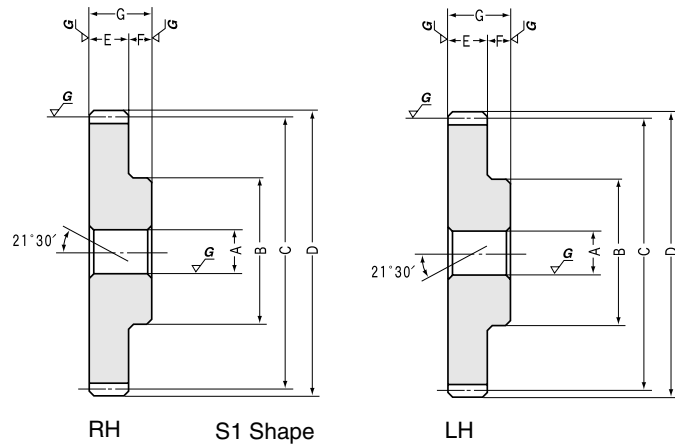
NOTE 2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions.
Please see page 131 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



KHG Ground Helical Gears Transverse Module 2

Helical Gears
GTR



Module 2

Catalog No.	Direction of Helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width ^{NOTE 1}	Hub width	Total length
		<i>m</i>	<i>z</i>	A _{H7}	B	C	D	E	F	G
KHG2- 15R KHG2- 15L	R L	2	15	12	24	30	34	16	13	29
KHG2- 16R KHG2- 16L	R L	2	16	12	26	32	36	16	13	29
KHG2- 18R KHG2- 18L	R L	2	18	12	30	36	40	16	13	29
KHG2- 20R KHG2- 20L	R L	2	20	15	32	40	44	16	13	29
KHG2- 22R KHG2- 22L	R L	2	22	15	36	44	48	16	13	29
KHG2- 24R KHG2- 24L	R L	2	24	15	38	48	52	16	13	29
KHG2- 25R KHG2- 25L	R L	2	25	15	40	50	54	16	13	29
KHG2- 26R KHG2- 26L	R L	2	26	15	42	52	56	16	13	29
KHG2- 28R KHG2- 28L	R L	2	28	15	45	56	60	16	13	29
KHG2- 30R KHG2- 30L	R L	2	30	18	50	60	64	16	13	29
KHG2- 32R KHG2- 32L	R L	2	32	18	50	64	68	16	13	29
KHG2- 35R KHG2- 35L	R L	2	35	18	50	70	74	16	13	29
KHG2- 36R KHG2- 36L	R L	2	36	18	50	72	76	16	13	29
KHG2- 40R KHG2- 40L	R L	2	40	20	60	80	84	16	13	29
KHG2- 44R KHG2- 44L	R L	2	44	20	60	88	92	16	13	29
KHG2- 45R KHG2- 45L	R L	2	45	20	60	90	94	16	13	29
KHG2- 48R KHG2- 48L	R L	2	48	20	60	96	100	16	13	29
KHG2- 50R KHG2- 50L	R L	2	50	25	60	100	104	16	13	29
KHG2- 52R KHG2- 52L	R L	2	52	25	65	104	108	16	13	29
KHG2- 60R KHG2- 60L	R L	2	60	25	65	120	124	16	13	29
KHG2- 70R KHG2- 70L	R L	2	70	25	70	140	144	16	13	29
KHG2- 80R KHG2- 80L	R L	2	80	25	80	160	164	16	13	29
KHG2- 90R KHG2- 90L	R L	2	90	25	90	180	184	16	13	29
KHG2-100R KHG2-100L	R L	2	100	25	100	200	204	16	13	29

CAUTION: Right handed and left handed helical gears in the same module are designed to mesh as a pair, but they are not interchangeable with SH type helical gears.
NOTE 1: It is possible to perform secondary operations except on the gear teeth. We recommend that you avoid shortening the hub which will lead to the deformation of the gears.



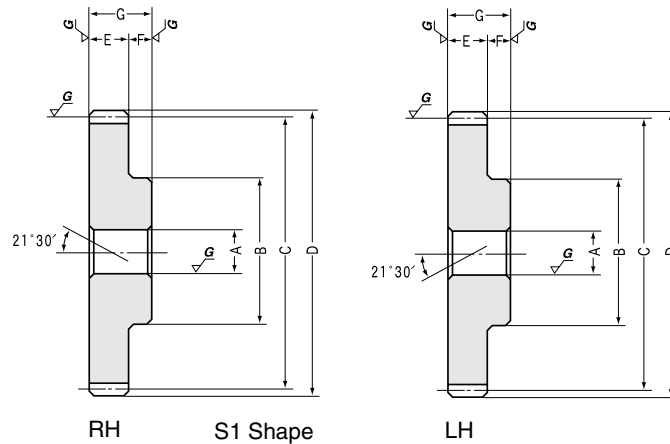
Specifications

Precision grade	JIS N6 grade (JIS B1702-1: 1996) OLD JIS 2 grade (JIS B1702: 1976)	Heat treatment	Thermal refined, tooth surfaces induction hardened
Reference section of gear	Rotating plane	Tooth hardness	50~55HRC
Gear teeth	Standard full depth	Surface treatment	Black oxide except ground surfaces
Transverse pressure angle	20°	Tooth surface finish	Ground
Helix angle	21°30'	Datum reference surface for gear grinding	Bore
Material	SCM440	Secondary Operations	Possible except tooth area

Shape	Allowable torque (N·m) NOTE 2		Allowable torque (kgf·m)		Backlash (mm) NOTE 3	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	40.45	22.75	(4.125)	(2.32)	0.1 ~ 0.2	0.11	KHG2- 15R KHG2- 15L
S1	40.63	24.09	(4.143)	(2.457)	0.1 ~ 0.2	0.13	KHG2- 16R KHG2- 16L
S1	48.53	31.86	(4.949)	(3.249)	0.1 ~ 0.2	0.17	KHG2- 18R KHG2- 18L
S1	56.62	40.83	(5.774)	(4.164)	0.1 ~ 0.2	0.2	KHG2- 20R KHG2- 20L
S1	64.87	50.56	(6.615)	(5.156)	0.1 ~ 0.2	0.25	KHG2- 22R KHG2- 22L
S1	73.25	61.43	(7.47)	(6.264)	0.1 ~ 0.2	0.3	KHG2- 24R KHG2- 24L
S1	77.49	67.29	(7.902)	(6.862)	0.1 ~ 0.2	0.33	KHG2- 25R KHG2- 25L
S1	81.76	73.44	(8.337)	(7.489)	0.12 ~ 0.22	0.37	KHG2- 26R KHG2- 26L
S1	90.35	86.62	(9.213)	(8.833)	0.12 ~ 0.22	0.43	KHG2- 28R KHG2- 28L
S1	99.05	101	(10.1)	(10.3)	0.12 ~ 0.22	0.5	KHG2- 30R KHG2- 30L
S1	107.8	116.5	(10.99)	(11.88)	0.12 ~ 0.22	0.55	KHG2- 32R KHG2- 32L
S1	121	142.2	(12.34)	(14.5)	0.12 ~ 0.22	0.63	KHG2- 35R KHG2- 35L
S1	125.5	151.3	(12.8)	(15.43)	0.12 ~ 0.22	0.65	KHG2- 36R KHG2- 36L
S1	143.4	191	(14.62)	(19.48)	0.12 ~ 0.22	0.85	KHG2- 40R KHG2- 40L
S1	161.4	235.7	(16.46)	(24.04)	0.12 ~ 0.22	0.98	KHG2- 44R KHG2- 44L
S1	165.9	247.7	(16.92)	(25.26)	0.12 ~ 0.22	1	KHG2- 45R KHG2- 45L
S1	171.8	273.2	(17.52)	(27.86)	0.12 ~ 0.22	1.1	KHG2- 48R KHG2- 48L
S1	180.5	298.9	(18.41)	(30.48)	0.12 ~ 0.22	1.2	KHG2- 50R KHG2- 50L
S1	189.3	326	(19.3)	(33.24)	0.14 ~ 0.24	1.29	KHG2- 52R KHG2- 52L
S1	224.6	446.7	(22.9)	(45.55)	0.14 ~ 0.24	1.6	KHG2- 60R KHG2- 60L
S1	269	624.8	(27.43)	(63.71)	0.14 ~ 0.24	2.2	KHG2- 70R KHG2- 70L
S1	300.6	798.6	(30.65)	(81.44)	0.14 ~ 0.24	2.9	KHG2- 80R KHG2- 80L
S1	343.6	1030	(35.04)	(105)	0.14 ~ 0.24	3.37	KHG2- 90R KHG2- 90L
S1	386.7	1290	(39.43)	(131.5)	0.14 ~ 0.24	4.63	KHG2-100R KHG2-100L

NOTE 2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 131 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



Module 2.5

Catalog No.	Direction of Helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width <small>NOTE 1</small>	Hub width	Total length
		<i>m</i>	<i>z</i>	A _{H7}	B	C	D	E	F	G
KHG2.5-15R KHG2.5-15L	R L	2.5	15	15	30	37.5	42.5	20	14	34
KHG2.5-16R KHG2.5-16L	R L	2.5	16	15	32	40	45	20	14	34
KHG2.5-18R KHG2.5-18L	R L	2.5	18	15	38	45	50	20	14	34
KHG2.5-20R KHG2.5-20L	R L	2.5	20	18	40	50	55	20	14	34
KHG2.5-22R KHG2.5-22L	R L	2.5	22	18	44	55	60	20	14	34
KHG2.5-24R KHG2.5-24L	R L	2.5	24	18	48	60	65	20	14	34
KHG2.5-25R KHG2.5-25L	R L	2.5	25	20	50	62.5	67.5	20	14	34
KHG2.5-26R KHG2.5-26L	R L	2.5	26	20	50	65	70	20	14	34
KHG2.5-28R KHG2.5-28L	R L	2.5	28	20	60	70	75	20	14	34
KHG2.5-30R KHG2.5-30L	R L	2.5	30	20	65	75	80	20	14	34
KHG2.5-32R KHG2.5-32L	R L	2.5	32	20	70	80	85	20	14	34
KHG2.5-35R KHG2.5-35L	R L	2.5	35	20	70	87.5	92.5	20	14	34
KHG2.5-36R KHG2.5-36L	R L	2.5	36	20	70	90	95	20	14	34
KHG2.5-40R KHG2.5-40L	R L	2.5	40	25	70	100	105	20	14	34
KHG2.5-44R KHG2.5-44L	R L	2.5	44	25	75	110	115	20	14	34
KHG2.5-45R KHG2.5-45L	R L	2.5	45	25	75	112.5	117.5	20	14	34
KHG2.5-48R KHG2.5-48L	R L	2.5	48	25	75	120	125	20	14	34
KHG2.5-50R KHG2.5-50L	R L	2.5	50	25	80	125	130	20	14	34
KHG2.5-52R KHG2.5-52L	R L	2.5	52	25	80	130	135	20	14	34
KHG2.5-60R KHG2.5-60L	R L	2.5	60	25	80	150	155	20	14	34

CAUTION: Right handed and left handed helical gears in the same module are designed to mesh as a pair, but they are not interchangeable with SH type helical gears.

NOTE 1: It is possible to perform secondary operations except on the gear teeth. We recommend that you avoid shortening the hub which will lead to the deformation of the gears.



Specifications

Precision grade	JIS N6 grade (JIS B1702-1: 1998) OLD JIS 2 grade (JIS B1702: 1976)	Heat treatment	Thermal refined, tooth surfaces induction hardened
Reference section of gear	Rotating plane	Tooth hardness	50~55HRC
Gear teeth	Standard full depth	Surface treatment	Black oxide except ground surfaces
Transverse pressure angle	20°	Tooth surface finish	Ground
Helix angle	21°30'	Datum reference surface for gear grinding	Bore
Material	SCM440	Secondary Operations	Possible except tooth area

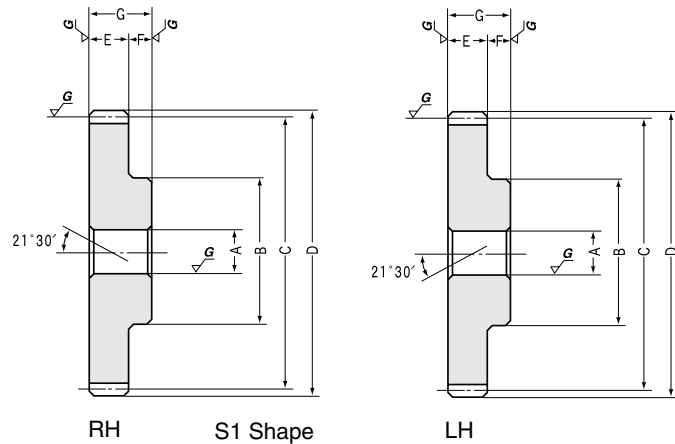
Shape	Allowable torque (N·m) <small>NOTE 2</small>		Allowable torque (kgf·m)		Backlash (mm) <small>NOTE 3</small>	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	71.82	41.09	(7.324)	(4.19)	0.1 ~ 0.2	0.21	KHG2.5-15R KHG2.5-15L
S1	79.36	47.93	(8.093)	(4.888)	0.1 ~ 0.2	0.25	KHG2.5-16R KHG2.5-16L
S1	94.78	63.4	(9.665)	(6.465)	0.1 ~ 0.2	0.34	KHG2.5-18R KHG2.5-18L
S1	110.6	81.25	(11.28)	(8.285)	0.1 ~ 0.2	0.39	KHG2.5-20R KHG2.5-20L
S1	126.7	100.6	(12.92)	(10.26)	0.12 ~ 0.22	0.49	KHG2.5-22R KHG2.5-22L
S1	143.1	122.3	(14.59)	(12.47)	0.12 ~ 0.22	0.6	KHG2.5-24R KHG2.5-24L
S1	151.3	134	(15.43)	(13.66)	0.12 ~ 0.22	0.64	KHG2.5-25R KHG2.5-25L
S1	159.7	146.2	(16.28)	(14.91)	0.12 ~ 0.22	0.65	KHG2.5-26R KHG2.5-26L
S1	176.4	172.6	(17.99)	(17.6)	0.12 ~ 0.22	0.87	KHG2.5-28R KHG2.5-28L
S1	193.4	201.2	(19.72)	(20.52)	0.12 ~ 0.22	1	KHG2.5-30R KHG2.5-30L
S1	210.5	232.3	(21.47)	(23.69)	0.12 ~ 0.22	1.2	KHG2.5-32R KHG2.5-32L
S1	236.4	283.6	(24.11)	(28.92)	0.12 ~ 0.22	1.3	KHG2.5-35R KHG2.5-35L
S1	245.1	301.9	(24.99)	(30.79)	0.12 ~ 0.22	1.4	KHG2.5-36R KHG2.5-36L
S1	267.8	364.9	(27.31)	(37.21)	0.12 ~ 0.22	1.6	KHG2.5-40R KHG2.5-40L
S1	301.6	450.8	(30.75)	(45.97)	0.14 ~ 0.24	1.9	KHG2.5-44R KHG2.5-44L
S1	310.1	473.9	(31.62)	(48.32)	0.14 ~ 0.24	2	KHG2.5-45R KHG2.5-45L
S1	335.6	546.7	(34.22)	(55.75)	0.14 ~ 0.24	2.2	KHG2.5-48R KHG2.5-48L
S1	352.6	598.5	(35.96)	(61.03)	0.14 ~ 0.24	2.4	KHG2.5-50R KHG2.5-50L
S1	369.7	652.3	(37.7)	(66.52)	0.14 ~ 0.24	2.5	KHG2.5-52R KHG2.5-52L
S1	438.5	890.1	(44.72)	(90.77)	0.14 ~ 0.24	3.3	KHG2.5-60R KHG2.5-60L

NOTE 2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions.
Please see page 131 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



KHG Ground Helical Gears Transverse Module 3



Helical Gears
GIK

Module 3

Catalog No.	Direction of Helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width ^{NOTE 1}	Hub width	Total length
		<i>m</i>	<i>z</i>	A _{H7}	B	C	D	E	F	G
KHG3-15R KHG3-15L	R L	3	15	18	36	45	51	25	16	41
KHG3-16R KHG3-16L	R L	3	16	18	38	48	54	25	16	41
KHG3-18R KHG3-18L	R L	3	18	18	40	54	60	25	16	41
KHG3-20R KHG3-20L	R L	3	20	20	50	60	66	25	16	41
KHG3-22R KHG3-22L	R L	3	22	20	54	66	72	25	16	41
KHG3-24R KHG3-24L	R L	3	24	20	58	72	78	25	16	41
KHG3-25R KHG3-25L	R L	3	25	20	60	75	81	25	16	41
KHG3-26R KHG3-26L	R L	3	26	20	60	78	84	25	16	41
KHG3-28R KHG3-28L	R L	3	28	20	70	84	90	25	16	41
KHG3-30R KHG3-30L	R L	3	30	25	75	90	96	25	16	41
KHG3-32R KHG3-32L	R L	3	32	25	75	96	102	25	16	41
KHG3-35R KHG3-35L	R L	3	35	25	80	105	111	25	16	41
KHG3-36R KHG3-36L	R L	3	36	25	80	108	114	25	16	41
KHG3-40R KHG3-40L	R L	3	40	25	80	120	126	25	16	41
KHG3-44R KHG3-44L	R L	3	44	25	80	132	138	25	16	41
KHG3-45R KHG3-45L	R L	3	45	25	80	135	141	25	16	41
KHG3-48R KHG3-48L	R L	3	48	25	85	144	150	25	16	41
KHG3-50R KHG3-50L	R L	3	50	30	85	150	156	25	16	41
KHG3-52R KHG3-52L	R L	3	52	30	85	156	162	25	16	41
KHG3-60R KHG3-60L	R L	3	60	30	90	180	186	25	16	41

CAUTION: Right handed and left handed helical gears in the same module are designed to mesh as a pair, but they are not interchangeable with SH type helical gears.

NOTE 1: It is possible to perform secondary operations except on the gear teeth. We recommend that you avoid shortening the hub which will lead to the deformation of the gears.



Specifications

Precision grade	JIS N6 grade (JIS B1702-1: 1996) OLD JIS 2 grade (JIS B1702: 1976)	Heat treatment	Thermal refined, tooth surfaces induction hardened
Reference section of gear	Rotating plane	Tooth hardness	50~55HRC
Gear teeth	Standard full depth	Surface treatment	Black oxide except ground surfaces
Transverse pressure angle	20°	Tooth surface finish	Ground
Helix angle	21°30'	Datum reference surface for gear grinding	Bore
Material	SCM440	Secondary Operations	Possible except tooth area

Shape	Allowable torque (N·m) NOTE 2		Allowable torque (kgf·m)		Backlash (mm) NOTE 3	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	129.3	74.69	(13.18)	(7.616)	0.1 ~ 0.2	0.36	KHG3-15R KHG3-15L
S1	142.9	87.16	(14.57)	(8.888)	0.1 ~ 0.2	0.42	KHG3-16R KHG3-16L
S1	170.6	115.3	(17.4)	(11.76)	0.12 ~ 0.22	0.53	KHG3-18R KHG3-18L
S1	199.1	148	(20.3)	(15.09)	0.12 ~ 0.22	0.7	KHG3-20R KHG3-20L
S1	228.1	184.1	(23.26)	(18.77)	0.12 ~ 0.22	0.86	KHG3-22R KHG3-22L
S1	257.5	223.8	(26.26)	(22.82)	0.12 ~ 0.22	1	KHG3-24R KHG3-24L
S1	272.4	245.2	(27.78)	(25)	0.12 ~ 0.22	1.1	KHG3-25R KHG3-25L
S1	287.4	267.7	(29.31)	(27.3)	0.12 ~ 0.22	1.2	KHG3-26R KHG3-26L
S1	317.6	316.1	(32.39)	(32.23)	0.12 ~ 0.22	1.5	KHG3-28R KHG3-28L
S1	348.1	368.7	(35.5)	(37.6)	0.12 ~ 0.22	1.6	KHG3-30R KHG3-30L
S1	362.5	407.4	(36.96)	(41.54)	0.12 ~ 0.22	1.8	KHG3-32R KHG3-32L
S1	407	497.6	(41.5)	(50.74)	0.14 ~ 0.26	2.2	KHG3-35R KHG3-35L
S1	422	529.8	(43.03)	(54.03)	0.14 ~ 0.26	2.3	KHG3-36R KHG3-36L
S1	482.1	670.1	(49.16)	(68.33)	0.14 ~ 0.26	2.7	KHG3-40R KHG3-40L
S1	542.9	827.5	(55.36)	(84.38)	0.14 ~ 0.26	3.2	KHG3-44R KHG3-44L
S1	558.1	869.2	(56.91)	(88.63)	0.14 ~ 0.26	3.3	KHG3-45R KHG3-45L
S1	604	1000	(61.59)	(102)	0.14 ~ 0.26	3.8	KHG3-48R KHG3-48L
S1	634.8	1094	(64.73)	(111.6)	0.14 ~ 0.26	4	KHG3-50R KHG3-50L
S1	665.6	1191	(67.87)	(121.5)	0.14 ~ 0.26	4.2	KHG3-52R KHG3-52L
S1	756.6	1560	(77.15)	(159.1)	0.14 ~ 0.26	5.6	KHG3-60R KHG3-60L

NOTE 2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions.
Please see page 131 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.