



# SMSG Ground Spiral Miter Gears

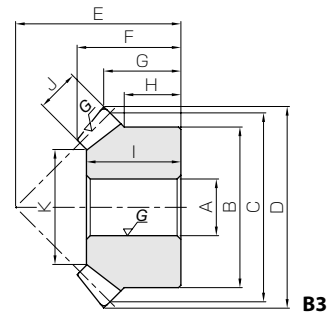


Module 1 ~ 5



Specifications		A <sub>H7</sub>	Bore
Precision grade	JIS B 1704 : 1978 grade 2	B	Hub dia.
Gear teeth	Gleason	C	Pitch dia.
Pressure angle	20°	D	Outside dia.
Helix angle	35°	E	Mounting distance
Material	S45C	F	Total length
Heat treatment	Teeth induction hardened	G	Crown to back
Tooth hardness	50 ~ 60HRC	H	Hub width
Gear ratio	1	I	Length of bore
Screw offset (L)	Half of hub width (H)	J	Face width
		K	Holding surface dia.

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



## Standardized ground spiral miter gears available in Module 1!

Catalog No.	No. of teeth	Shape	A <sub>H7</sub>	B	C	D	E	F	G	H	I	J	K	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)		
														Bending strength	Surface durability	Bending strength	Surface durability				
SMSG1-20R SMSG1-20L	20	B3	6	16	20	21.30	20	13.84	10.65	8	12	5	9.86	1.17	0.97	0.12	0.099	0.02~0.08	0.019		
SMSG1.5-20R SMSG1.5-20L			8	26	30	31.74	30	21.18	15.87	13	19	8	15.37	4.10	3.47	0.42	0.35	0.04~0.10	0.074		
SMSG2-20R SMSG2-20L			12	34	40	42.4	37	24.75	18.2	14	22	10	21.72	7.83	6.79	0.80	0.69	0.05~0.11	0.15		
SMSG2.5-20R SMSG2.5-20L			14	42	50	52.94	48	32.42	24.47	19	29	12	28.06	14.9	13.2	1.52	1.35	0.06~0.12	0.30		
SMSG3-20R SMSG3-20L			16	50	60	63.72	58	39.6	29.86	23	35	15	31.57	26.4	23.7	2.69	2.42	0.07~0.13	0.52		
SMSG3.5-20R SMSG3.5-20L			20	60	70	74.47	65	43.81	32.23	25	40	18	39.09	42.6	38.8	4.35	3.96	0.08~0.14	0.82		
SMSG4-20R SMSG4-20L			20	64	80	84.88	75	50.51	37.44	27	45	20	43.43	62.6	57.8	6.39	5.90	0.10~0.16	1.15		
SMSG5-20R SMSG5-20L			25	80	100	105.9	90	60.16	42.95	30	54	26	54.46	115	109	11.8	11.1	0.12~0.18	2.13		
SMSG1-25R SMSG1-25L			25	B3	6	20	25	26.22	23	15.08	11.11	8	14	6	15.03	1.88	1.91	0.19	0.19	0.02~0.08	0.035
SMSG1.5-25R SMSG1.5-25L					10	30	37.5	39.31	34	22.14	16.16	11.5	19	9	19.54	5.29	5.52	0.54	0.56	0.04~0.10	0.11
SMSG2-25R SMSG2-25L	12	40			50	52.4	40	24.19	16.2	10	20	12	26.06	12.6	13.5	1.28	1.37	0.05~0.11	0.21		
SMSG2.5-25R SMSG2.5-25L	16	50			62.5	65.54	50	30.24	20.27	12.5	26	15	34.57	24.5	26.8	2.50	2.74	0.06~0.12	0.42		
SMSG3-25R SMSG3-25L	20	60			75	78.77	60	37.57	24.39	15	32	20	37.43	45.0	50.0	4.59	5.10	0.07~0.13	0.74		
SMSG3.5-25R SMSG3.5-25L	25	70			87.5	91.81	70	42.98	28.41	17.5	37	22	46.77	69.2	78.1	7.05	7.97	0.08~0.14	1.14		
SMSG4-25R SMSG4-25L	28	80			100	104.7	80	49.14	32.35	20	43	25	55.29	95.0	109	9.68	11.1	0.10~0.16	1.71		
SMSG5-25R SMSG5-25L	28	100			125	130.86	100	60.59	40.43	25	50	30	65.15	181	213	18.5	21.7	0.12~0.18	3.39		
SMSG1-30R SMSG1-30L	30	B3			8	24	30	31.26	28	17.61	13.63	10	16	6	19.03	2.50	3.02	0.25	0.31	0.02~0.08	0.057
SMSG1.5-30R SMSG1.5-30L					10	36	45	46.84	43	28.11	21.42	16	25	10	25.72	7.53	9.35	0.77	0.95	0.04~0.10	0.21
SMSG2-30R SMSG2-30L			12	45	60	62.42	50	29.27	21.21	12.5	25	12	36.06	16.7	21.4	1.70	2.18	0.05~0.11	0.37		
SMSG2.5-30R SMSG2.5-30L			16	60	75	78.04	62	36.08	26.02	17	32	15	47.57	32.6	42.7	3.32	4.36	0.06~0.12	0.76		
SMSG3-30R SMSG3-30L			20	70	90	93.61	75	45.25	31.8	20	40	20	53.43	60.3	80.4	6.15	8.20	0.07~0.13	1.32		
SMSG3.5-30R SMSG3.5-30L			25	90	105	109.21	85	49.4	34.6	25	45	22	67.77	85.1	115	8.68	11.8	0.08~0.14	2.19		
SMSG4-30R SMSG4-30L			28	100	120	124.71	95	54.28	37.35	25	50	25	79.29	127	174	12.9	17.8	0.10~0.16	3.07		
SMSG5-30R SMSG5-30L			28	130	150	155.90	120	68.20	47.95	35	62	30	99.15	240	332	24.5	33.9	0.12~0.18	6.44		

[Caution on Product Characteristics]

- ① A sets of miter gears must be identical in module and number of teeth, but opposite in spiral hands.
- ② The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 253 for more details.
- ③ Dimensions of the outside diameter, the overall length and crown to back length are all theoretical values, and some differences will occur due to the corner chamfering of the gear tips.
- ④ These gears produce axial thrust forces. See page 254 for more details.

[Caution on Secondary Operations]

- ① Please read "Caution on Performing Secondary Operations" (Page 254) when performing modification and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.
- ② Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 1 to 2 mm).