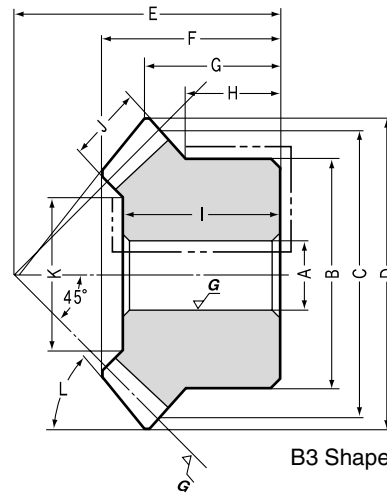




MMSG Ground Spiral Miter Gears Modules 2~4



20 Tooth Miter Gears Modules 2~4

Catalog No.	Direction of Spiral	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length	Hub width	Length of bore	Face width
		<i>m</i>	<i>z</i>	AH7	B	C	D	E	F	G	H	I	J
MMSG2 -20R MMSG2 -20L	R L	2	20	12	35	40	42.7	35	21.98	16.35	12.5	20	9
MMSG2.5-20R MMSG2.5-20L	R L	2.5	20	14	42	50	53.2	45	28.63	21.6	16	26	11
MMSG3 -20R MMSG3 -20L	R L	3	20	16	52	60	63.99	50	30.78	21.99	16	27	14
MMSG3.5-20R MMSG3.5-20L	R L	3.5	20	20	50	70	74.53	55	32.45	22.26	14	29	16
MMSG4 -20R MMSG4 -20L	R L	4	20	20	55	80	84.99	65	39.13	27.5	17	35	18

25 Tooth Miter Gears Modules 2~4

MMSG2 -25R MMSG2 -25L	R L	2	25	12	38	50	52.5	40	23.43	16.25	11	21	11
MMSG2.5-25R MMSG2.5-25L	R L	2.5	25	16	45	62.5	65.54	50	29.57	20.27	14	26	14
MMSG3 -25R MMSG3 -25L	R L	3	25	20	55	75	78.78	60	35.6	24.39	17	31	17
MMSG3.5-25R MMSG3.5-25L	R L	3.5	25	25	65	87.5	91.81	70	41.65	28.41	19	37	20
MMSG4 -25R MMSG4 -25L	R L	4	25	28	75	100	104.7	80	47.8	32.35	22	42	23

30 Tooth Miter Gears Modules 2~4

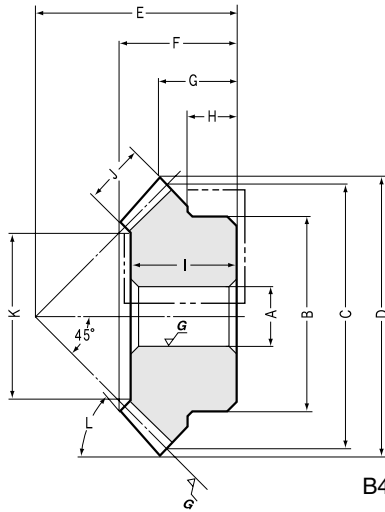
MMSG2 -30R MMSG2 -30L	R L	2	30	14	45	60	62.42	50	29.27	21.21	15	26	12
MMSG2.5-30R MMSG2.5-30L	R L	2.5	30	16	55	75	78.04	60	34.08	24.02	16	30	15
MMSG3 -30R MMSG3 -30L	R L	3	30	20	65	90	93.61	70	40.25	26.8	18	36	20
MMSG3.5-30R MMSG3.5-30L	R L	3.5	30	25	80	105	109.21	80	44.4	29.6	20	40	22
MMSG4 -30R MMSG4 -30L	R L	4	30	28	90	120	124.7	90	49.27	32.35	22	44	25

CAUTION: A set of miter gears must be identical in module and number of teeth, but opposite in spiral hands.

CAUTION: 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.



Ground Spiral Miter Gears



B4 Shape

Specifications

Precision grade	JIS B 1704 grade 2	Tooth hardness	55~60HRC
Gear teeth	Gleason	Surface treatment	—
Pressure angle	20°	Tooth surface finish	Ground
Helix angle	35°	Datum reference surface for gear grinding	Bore
Material	SCM415	Secondary Operations	Possible where masking for carburizing
Heat treatment	Carburizing NOTE 1		

NOTE 1: The areas marked with ---- on the diagram are masked during the carburizing and can be modified, even though the hardness is somewhat higher.

Holding surface dia. K	Tip angle L	Shape	Allowable torque (N·m) NOTE 2		Allowable torque (kgf·m)		Backlash (mm)	Weight (kgf)	Catalog No.
			Bending strength	Surface durability	Bending strength	Surface durability			
24.54	51°34'	B3	15.59	21.7	(1.589)	(2.213)	0.05 ~ 0.11	0.14	MMSG2 -20R MMSG2 -20L
30.89	50°28'	B3	30	42.63	(3.06)	(4.347)	0.06 ~ 0.12	0.26	MMSG2.5-20R MMSG2.5-20L
34.4	51°24'	B3	53.8	77.59	(5.48)	(7.912)	0.07 ~ 0.13	0.44	MMSG3 -20R MMSG3 -20L
42.75	50°40'	B4	84.3	123.5	(8.6)	(12.59)	0.08 ~ 0.14	0.5	MMSG3.5-20R MMSG3.5-20L
49.08	49°54'	B4	124.7	184.9	(12.71)	(18.85)	0.1 ~ 0.16	0.72	MMSG4 -20R MMSG4 -20L

Pitch Angle 45°

30.89	49°23'	B4	25.3	43.49	(2.57)	(4.435)	0.05 ~ 0.11	0.2	MMSG2 -25R MMSG2 -25L
37.4	48°26'	B4	49.9	87.62	(5.09)	(8.935)	0.06 ~ 0.12	0.4	MMSG2.5-25R MMSG2.5-25L
43.92	48°52'	B4	86.8	155.1	(8.85)	(15.82)	0.07 ~ 0.13	0.7	MMSG3 -25R MMSG3 -25L
52.43	48°37'	B4	138.6	251.4	(14.13)	(25.64)	0.08 ~ 0.14	1.1	MMSG3.5-25R MMSG3.5-25L
58.95	47°52'	B4	191.7	352.6	(19.55)	(35.96)	0.1 ~ 0.16	1.7	MMSG4 -25R MMSG4 -25L

Pitch Angle 45°

38.06	47°53'	B4	35.4	72.87	(3.61)	(7.431)	0.05 ~ 0.11	0.37	MMSG2 -30R MMSG2 -30L
47.57	47°58'	B4	69.1	145.3	(7.05)	(14.82)	0.06 ~ 0.12	0.77	MMSG2.5-30R MMSG2.5-30L
55.43	47°47'	B4	127.9	273.6	(13.04)	(27.9)	0.07 ~ 0.13	1.3	MMSG3 -30R MMSG3 -30L
67.77	47°48'	B4	180.5	392.8	(18.41)	(40.05)	0.08 ~ 0.14	2.3	MMSG3.5-30R MMSG3.5-30L
77.29	47°26'	B4	268	593.1	(27.4)	(60.48)	0.1 ~ 0.16	3.2	MMSG4 -30R MMSG4 -30L

NOTE2: The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 196 for more details.

Pitch Angle 45°