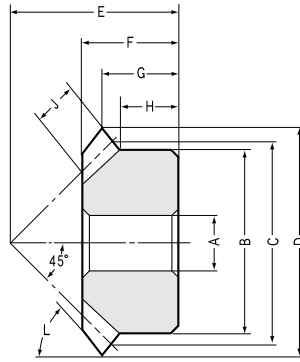
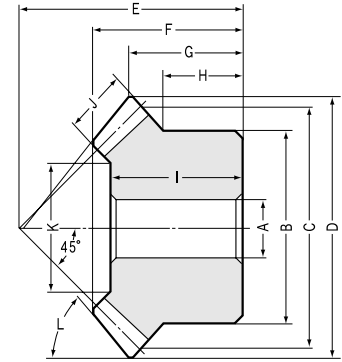




SM Miter Gears Modules 1~8



B2 Shape



B3 Shape

16 Tooth Miter Gears Modules 2~5

Catalog No.	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	Holding surface dia.	Tip angle
	<i>m</i>	<i>z</i>	AH7	B	C	D	E	F	G	H	I(F)	J	K	L
SM2 -16	2	16	10	27	32	34.83	30	19	15.41	11.5	19	7	—	51°00'
SM2.5-16	2.5	16	12	34	40	43.53	35	21	16.77	12	21	9	—	51°00'
SM3 -16	3	16	14	42	48	52.24	40	23	18.12	13	23	11	—	51°00'
SM4 -16	4	16	16	55	64	69.66	50	28	20.83	13.5	28	14	—	51°00'
SM5 -16	5	16	20	70	80	87.07	65	37	28.53	20	37	17	—	51°00'

20 Tooth Miter Gears Modules 1~8

SM1 -20	1	20	6	16	20	21.41	20	13.94	10.71	8	12	5	9.86	49°48'
SM1.25-20	1.25	20	8	22	25	26.77	23	15.27	11.38	9	13	6	13.03	49°48'
SM1.5 -20	1.5	20	8	26	30	32.12	30	21.24	16.06	13	19	8	15.37	49°48'
SM2 -20	2	20	12	34	40	42.83	37	24.89	18.41	14	22	10	21.72	49°48'
SM2.5 -20	2.5	20	14	42	50	53.54	48	32.54	24.77	19	29	12	28.06	49°48'
SM3 -20	3	20	16	50	60	64.24	58	39.84	30.12	23	35	15	31.57	49°48'
SM3.5 -20	3.5	20	20	60	70	74.95	65	44.13	32.47	25	40	18	39.09	49°48'
SM4 -20	4	20	20	64	80	85.65	75	50.78	37.83	27	45	20	43.43	49°48'
SM5 -20	5	20	25	80	100	107.07	90	60.38	43.54	30	54	26	54.46	49°48'
SM6 -20	6	20	28	100	120	128.48	104	67.67	48.24	34	60	30	67.15	49°48'
SM8 -20	8	20	30	130	160	171.31	125	73.33	50.66	30	62	35	95	49°48'

25 Tooth Miter Gears Modules 1~6

SM1 -25	1	25	6	20	25	26.41	23	15.16	11.21	8	14	6	15.03	48°51'
SM1.25-25	1.25	25	8	25	31.25	33.02	28	17.88	13.26	9.25	16	7	18.70	48°51'
SM1.5 -25	1.5	25	10	30	37.5	39.62	34	22.25	16.31	11.5	19	9	19.54	48°51'
SM2 -25	2	25	12	40	50	52.83	40	24.33	16.41	10	20	12	26.06	48°51'
SM2.5 -25	2.5	25	16	50	62.5	66.04	50	30.41	20.52	12.5	26	15	34.57	48°51'
SM3 -25	3	25	20	60	75	79.24	60	37.81	24.62	15	32	20	37.43	48°51'
SM3.5 -25	3.5	25	25	70	87.5	92.45	70	43.23	28.72	17.5	37	22	46.77	48°51'
SM4 -25	4	25	28	80	100	105.66	80	49.32	32.83	20	43	25	55.29	48°51'
SM5 -25	5	25	28	100	125	132.07	100	60.82	41.04	25	50	30	65.15	48°51'
SM6 -25	6	25	28	120	150	158.48	120	72.32	49.24	30	61	35	83	48°51'

30 Tooth Miter Gears Module 1~5

SM1 -30	1	30	8	24	30	31.41	28	17.71	13.71	10	16	6	19.03	48°12'
SM1.25-30	1.25	30	10	30	37.5	39.27	36	23.47	18.13	13.5	21	8	22.37	48°12'
SM1.5 -30	1.5	30	10	36	45	47.12	43	28.24	21.56	16	25	10	25.71	48°12'
SM2 -30	2	30	12	45	60	62.83	50	29.42	21.41	12.5	25	12	36.06	48°12'
SM2.5 -30	2.5	30	16	60	75	78.54	62	36.28	26.27	17	32	15	47.57	48°12'
SM3 -30	3	30	20	70	90	94.24	75	45.47	32.12	20	40	20	53.43	48°12'
SM3.5 -30	3.5	30	25	90	105	109.95	85	49.66	34.97	25	45	22	67.77	48°12'
SM4 -30	4	30	28	100	120	125.66	95	54.52	37.83	25	50	25	79.29	48°12'
SM5 -30	5	30	28	130	150	157.07	120	68.56	48.54	35	62	30	99.15	48°12'

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.



Specifications

Precision grade	JIS B 1704 grade 3	Tooth hardness	Less than 194HB
Gear teeth	Gleason	Surface treatment	Black oxide
Pressure angle	20°	Tooth surface finish	Cut
Material	S45C	Datum reference surface for gear cutting	Bore
Heat treatment	—	Secondary Operations	Possible

Shape	Allowable torque (N·m) <small>NOTE 1</small>		Allowable torque (kgf·m)		Backlash (mm)	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
B2	3.837	0.3324	(0.3913)	(0.0339)	0.06 ~ 0.16	0.09	SM2 -16
B2	7.629	0.6767	(0.778)	(0.069)	0.07 ~ 0.17	0.13	SM2.5-16
B2	13.34	1.207	(1.36)	(0.1231)	0.08 ~ 0.18	0.22	SM3 -16
B2	30.7	2.866	(3.131)	(0.2923)	0.12 ~ 0.27	0.48	SM4 -16
B2	58.86	5.617	(6.002)	(0.5728)	0.14 ~ 0.34	1	SM5 -16

Pitch Angle 45°

B3	0.8914	0.0843	(0.0909)	(0.0086)	0.03 ~ 0.13	0.02	SM1 -20
B3	1.7	0.1628	(0.1734)	(0.0166)	0.04 ~ 0.14	0.04	SM1.25-20
B3	3.118	0.304	(0.3179)	(0.031)	0.05 ~ 0.15	0.07	SM1.5 -20
B3	7.13	0.7188	(0.7271)	(0.0733)	0.06 ~ 0.16	0.15	SM2 -20
B3	13.6	1.407	(1.387)	(0.1435)	0.07 ~ 0.17	0.3	SM2.5 -20
B3	24.07	2.537	(2.454)	(0.2587)	0.08 ~ 0.18	0.5	SM3 -20
B3	38.82	4.154	(3.959)	(0.4236)	0.1 ~ 0.25	0.8	SM3.5 -20
B3	57.04	6.185	(5.817)	(0.6307)	0.12 ~ 0.27	1.1	SM4 -20
B3	113.9	12.63	(11.61)	(1.288)	0.14 ~ 0.34	2.1	SM5 -20
B3	190.6	21.81	(19.44)	(2.224)	0.16 ~ 0.36	3.6	SM6 -20
B3	412.6	49.63	(42.07)	(5.061)	0.2 ~ 0.45	7.1	SM8 -20

Pitch Angle 45°

B3	1.469	0.1628	(0.1498)	(0.0166)	0.03 ~ 0.13	0.04	SM1 -25
B3	2.752	0.3128	(0.2806)	(0.0319)	0.04 ~ 0.14	0.06	SM1.25-25
B3	4.959	0.5747	(0.5057)	(0.0586)	0.05 ~ 0.15	0.14	SM1.5 -25
B3	11.76	1.407	(1.199)	(0.1435)	0.06 ~ 0.16	0.2	SM2 -25
B3	22.96	2.814	(2.341)	(0.287)	0.07 ~ 0.17	0.4	SM2.5 -25
B3	42.1	5.243	(4.293)	(0.5346)	0.08 ~ 0.18	0.7	SM3 -25
B3	64.72	8.187	(6.6)	(0.8348)	0.1 ~ 0.25	1.1	SM3.5 -25
B3	96.3	12.38	(9.82)	(1.262)	0.12 ~ 0.27	1.7	SM4 -25
B3	183.7	24.2	(18.73)	(2.468)	0.14 ~ 0.34	3.4	SM5 -25
B3	309	42.1	(31.51)	(4.293)	0.16 ~ 0.36	5.4	SM6 -25

Pitch Angle 45°

B3	1.989	0.2569	(0.2028)	(0.0262)	0.03 ~ 0.13	0.05	SM1 -30
B3	4.054	0.5354	(0.4134)	(0.0546)	0.04 ~ 0.14	0.13	SM1.25-30
B3	7.189	0.9689	(0.7331)	(0.0988)	0.05 ~ 0.15	0.2	SM1.5 -30
B3	15.92	2.217	(1.623)	(0.2261)	0.06 ~ 0.16	0.37	SM2 -30
B3	31.08	4.426	(3.169)	(0.4513)	0.07 ~ 0.17	0.77	SM2.5 -30
B3	57.52	8.326	(5.865)	(0.849)	0.08 ~ 0.18	1.3	SM3 -30
B3	87.95	12.97	(8.969)	(1.323)	0.1 ~ 0.25	2.3	SM3.5 -30
B3	130.8	19.57	(13.34)	(1.996)	0.12 ~ 0.27	3.2	SM4 -30
B3	248.7	38.3	(25.36)	(3.906)	0.14 ~ 0.34	6	SM5 -30

Pitch Angle 45°

NOTE 1: The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 196 for more details