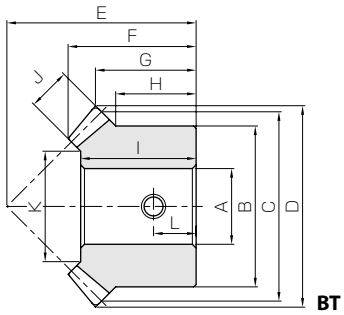
Finished Bore Miter Gears

Specifications	
Precision grade	JIS B 1704 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	—
Material	S45C
Heat treatment	Teeth induction hardened
Tooth hardness	45 ～ 55HRC



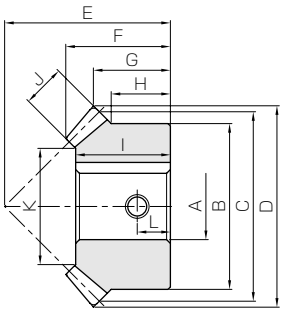
BT

Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length	Hub width	Length of bore
					A_{H7}	B	C	D	E	F	G	H	I
SMA1-20 **SMB1-20**	1	***m*1**	20	BT BT	8 10	16	20	21.41	20	13.95	10.71	8	12 12.07
SMA1.5-20 **SMB1.5-20**		***m*1.5**	20	BT BK	10 12	26	30	32.12	30	21.24	16.06	13	19 19
SMA2-20 **SMB2-20**		***m*2**	20	BK BK	14 15	34	40	42.83	37	24.89	18.41	14	22 22
SMA2.5-20 **SMB2.5-20**		***m*2.5**	20	BK BK	18 20	42	50	53.54	48	32.54	24.77	19	29 29
SMA3-20 **SMB3-20** **SMC3-20**		***m*3**	20	BK BK BK	22 25 20	50	60	64.24	58	39.84	30.12	23	35 35 35
SMA3.5-20 **SMB3.5-20**		***m*3.5**	20	BK BK	28 30	60	70	74.95	65	44.13	32.47	25	40 40
SMA4-20 **SMB4-20** **SMC4-20**		***m*4**	20	BK BK BK	30 32 25	64	80	85.65	75	50.78	37.83	27	45 45 45
SMA5-20 **SMB5-20** **SMC5-20**		***m*5**	20	BK BK BK	40 30 35	80	100	107.07	90	60.38	43.54	30	54 54 54
SMA6-20 **SMB6-20** **SMC6-20**		***m*6**	20	BK BK BK	45 50 40	100	120	128.48	104	67.67	48.24	34	60 60 60
SMA8-20		***m*8**	20	BK	60	130	160	171.31	125	73.33	50.66	30	62
SMA1-25	1	***m*1**	25	BT	10	20	25	26.41	23	15.16	11.21	8	14
SMA1.5-25		***m*1.5**	25	BK	12	30	37.5	39.62	34	22.25	16.31	11.5	19
SMA2-25 **SMB2-25**		***m*2**	25	BK BK	18 15	40	50	52.83	40	24.33	16.41	10	20
SMA2.5-25 **SMB2.5-25**		***m*2.5**	25	BK BK	20 18	50	62.5	66.04	50	30.41	20.52	12.5	26
SMA3-25 **SMB3-25**		***m*3**	25	BK BK	30 25	60	75	79.24	60	37.81	24.62	15	32
SMA3.5-25 **SMB3.5-25**		***m*3.5**	25	BK BK	32 28	70	87.5	92.45	70	43.23	28.72	17.5	37
SMA4-25 **SMB4-25**		***m*4**	25	BK BK	35 30	80	100	105.66	80	49.32	32.83	20	43
SMA5-25		***m*5**	25	BK	50	100	125	132.07	100	60.82	41.04	25	50
SMA6-25		***m*6**	25	BK	55	120	150	158.48	120	72.32	49.24	30	61
SMA1-30	1	***m*1**	30	BK	12	24	30	31.41	28	17.71	13.71	10	16
SMA1.5-30		***m*1.5**	30	BK	15	36	45	47.12	43	28.24	21.56	16	25
SMA2-30 **SMB2-30**		***m*2**	30	BK BK	20 15	45	60	62.83	50	29.42	21.41	12.5	25
SMA2.5-30 **SMB2.5-30**		***m*2.5**	30	BK BK	25 20	60	75	78.54	62	36.28	26.27	17	32
SMA3-30 **SMB3-30**		***m*3**	30	BK BK	32 25	70	90	94.24	75	45.47	32.12	20	40
SMA3.5-30 **SMB3.5-30**		***m*3.5**	30	BK BK	35 30	90	105	109.95	85	49.66	34.97	25	45
SMA4-30 **SMB4-30**		***m*4**	30	BK BK	40 30	100	120	125.66	95	54.52	37.83	25	50
SMA5-30		***m*5**	30	BK	55	130	150	157.07	120	68.56	48.54	35	62

[Caution on Product Characteristics]

① For products with a tapped hole, a set screw is included.
② The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 421 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 The keyway dimensions of items with " ※ "marks do not conform to JIS Standards.

Finished Bore Miter Gear



BK

Face width	Holding surface dia.	Keyway	Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
J	K	Width×Depth	Size	L	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	
5	9.86	—	M4	4	0.90	0.37	0.091	0.038	0.03~0.13	0.016	**SMA1-20**
	10	—	M4							0.014	**SMB1-20**
8	15.37	—	M4	6.5	3.13	1.31	0.32	0.13	0.05~0.15	0.069	**SMA1.5-20**
	15.37	4 x 1.8	M5							0.06	**SMB1.5-20**
10	21.72	5 x 2.3	M5	7	7.17	3.05	0.73	0.31	0.06~0.16	0.14	**SMA2-20**
	21.72	5 x 2.3	M5							0.13	**SMB2-20**
12	28.06	5 x 2.3*	M6	9.5	13.7	5.90	1.39	0.60	0.07~0.17	0.27	**SMA2.5-20**
	28.06	6 x 2.8	M6							0.26	**SMB2.5-20**
15	31.57	7 x 3*	M6	11.5	24.2	10.5	2.47	1.08	0.08~0.18	0.47	**SMA3-20**
	31.57	7 x 3*	M8							0.44	**SMB3-20**
	31.57	6 x 2.8	M6							0.49	**SMC3-20**
18	39.09	7 x 3*	M8	12.5	39.0	17.2	3.98	1.75	0.10~0.25	0.71	**SMA3.5-20**
	39.09	8 x 3.3	M8							0.68	**SMB3.5-20**
20	43.43	7 x 3*	M8	13.5	57.3	25.4	5.85	2.59	0.12~0.27	1.00	**SMA4-20**
	43.43	10 x 3.3	M8							0.96	**SMB4-20**
	43.43	8 x 3.3	M8							1.07	**SMC4-20**
26	54.46	10 x 3.3*	M8	15	114	51.3	11.7	5.23	0.14~0.34	1.80	**SMA5-20**
	54.46	8 x 3.3	M8							2.04	**SMB5-20**
	54.46	10 x 3.3	M8							1.93	**SMC5-20**
30	67.15	12 x 3.3*	M8	17	190	87.5	19.3	8.92	0.16~0.36	3.19	**SMA6-20**
	67.15	14 x 3.8	M8							3.01	**SMB6-20**
	67.15	12 x 3.3	M8							3.35	**SMC6-20**
35	95	18 x 4.4	M10	15	406	194	41.4	19.8	0.20~0.45	5.96	**SMA8-20**
6	15.03	—	M4	4	1.48	0.71	0.15	0.072	0.03~0.13	0.029	**SMA1-25**
9	19.54	4 x 1.8	M5	5.75	4.98	2.44	0.51	0.25	0.05~0.15	0.10	**SMA1.5-25**
12	26.06	6 x 2.8	M6	5	11.8	5.90	1.20	0.60	0.06~0.16	0.19	**SMA2-25**
		5 x 2.3	M5							0.20	**SMB2-25**
15	34.57	5 x 2.3*	M6	6	23.1	11.7	2.35	1.19	0.07~0.17	0.39	**SMA2.5-25**
		6 x 2.8	M6							0.40	**SMB2.5-25**
20	37.43	7 x 3*	M8	7.5	42.3	21.6	4.31	2.20	0.08~0.18	0.63	**SMA3-25**
		8 x 3.3	M8							0.69	**SMB3-25**
22	46.77	10 x 3.3	M8	8.5	65.0	33.5	6.63	3.42	0.10~0.25	1.04	**SMA3.5-25**
		8 x 3.3	M8							1.09	**SMB3.5-25**
25	55.29	10 x 3.3	M8	10	96.8	50.2	9.87	5.12	0.12~0.27	1.59	**SMA4-25**
		8 x 3.3	M8							1.68	**SMB4-25**
30	65.15	12 x 3.3*	M8	12.5	185	96.8	18.8	9.87	0.14~0.34	2.86	**SMA5-25**
35	83	16 x 4.3	M10	15	307	166	31.3	16.9	0.16~0.36	5.13	**SMA6-25**
6	19.03	4 x 1.8	M5	5	2.00	1.11	0.20	0.11	0.03~0.13	0.047	**SMA1-30**
10	25.71	5 x 2.3	M5	8	7.22	4.08	0.74	0.42	0.05~0.15	0.19	**SMA1.5-30**
12	36.06	6 x 2.8	M6	6.25	16.0	9.20	1.63	0.94	0.06~0.16	0.32	**SMA2-30**
		5 x 2.3	M5							0.35	**SMB2-30**
15	47.57	8 x 3.3	M8	8.5	31.2	18.2	3.19	1.86	0.07~0.17	0.68	**SMA2.5-30**
		6 x 2.8	M6							0.73	**SMB2.5-30**
20	53.43	10 x 3.3	M8	10	57.8	34.0	5.89	3.46	0.08~0.18	1.15	**SMA3-30**
		8 x 3.3	M8							1.25	**SMB3-30**
22	67.77	10 x 3.3	M8	12.5	88.4	52.3	9.01	5.34	0.10~0.25	2.01	**SMA3.5-30**
		8 x 3.3	M8							2.10	**SMB3.5-30**
25	79.29	12 x 3.3	M8	12.5	131	78.3	13.4	7.99	0.12~0.27	2.81	**SMA4-30**
		8 x 3.3	M8							3.03	**SMB4-30**
30	99.15	16 x 4.3	M10	17.5	250	150	25.5	15.3	0.14~0.34	5.56	**SMA5-30**

[Caution on Secondary Operations]

① Please read "Caution on Performing Secondary Operations" (Page 422) when performing modification and/or secondary operations for safety concerns. Haguruma Kobo, 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).