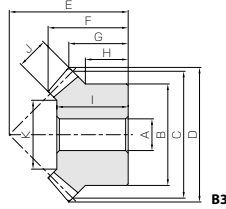


# SUM Stainless Steel Miter Gears

Module 1 ~ 4



Specifications	
Precision grade	JIS B 1704 : 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	SUS303
Heat treatment	—
Tooth hardness	(less than 187HB)



Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length		Hub width
					A <sub>H7</sub>	B					G	H	
<b>SUM1-20</b>	1	<b>m1</b>	20	B3	6	16	20	21.41	20	13.95	10.71	8	
<b>SUM1.5-20</b>		<b>m1.5</b>	20	B3	8	26	30	32.12	30	21.24	16.06	13	
<b>SUM2-20</b>		<b>m2</b>	20	B3	12	34	40	42.83	37	24.89	18.41	14	
<b>SUM2.5-20</b>		<b>m2.5</b>	20	B3	14	42	50	53.54	48	32.54	24.77	19	
<b>SUM3-20</b>		<b>m3</b>	20	B3	16	50	60	64.24	58	39.84	30.12	23	
<b>SUM4-20</b>	<b>m4</b>	20	B3	20	64	80	85.65	75	50.78	37.83	27		
<b>SUM1-25</b>	1	<b>m1</b>	25	B3	6	20	25	26.41	23	15.16	11.21	8	
<b>SUM1.5-25</b>		<b>m1.5</b>	25	B3	10	30	37.5	39.62	34	22.25	16.31	11.5	
<b>SUM2-25</b>		<b>m2</b>	25	B3	12	45	50	52.83	40	24.33	16.41	12.5	
<b>SUM2.5-25</b>		<b>m2.5</b>	25	B3	16	55	62.5	66.04	50	30.41	20.52	15	
<b>SUM3-25</b>		<b>m3</b>	25	B3	20	65	75	79.24	60	37.81	24.62	17.5	
<b>SUM4-25</b>	<b>m4</b>	25	B3	28	80	100	105.66	80	49.32	32.83	20		

[Caution on Product Characteristics] ① The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 253 for more details.  
② 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.

Length of bore	Face width	Holding surface dia.	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)	Catalog No.
			Bending strength	Surface durability	Bending strength	Surface durability			
12	5	9.86	0.49	0.060	0.050	0.0061	0.03~0.13	0.019	<b>SUM1-20</b>
19	8	15.37	1.72	0.22	0.18	0.022	0.05~0.15	0.074	<b>SUM1.5-20</b>
22	10	21.72	3.94	0.51	0.40	0.052	0.06~0.16	0.15	<b>SUM2-20</b>
29	12	28.06	7.52	1.00	0.77	0.10	0.07~0.17	0.30	<b>SUM2.5-20</b>
35	15	31.57	13.3	1.80	1.36	0.18	0.08~0.18	0.52	<b>SUM3-20</b>
45	20	43.43	31.5	4.39	3.22	0.45	0.12~0.27	1.15	<b>SUM4-20</b>
14	6	15.03	0.81	0.12	0.083	0.012	0.03~0.13	0.035	<b>SUM1-25</b>
19	9	19.54	2.74	0.41	0.28	0.042	0.05~0.15	0.11	<b>SUM1.5-25</b>
20	12	26.06	6.50	1.00	0.66	0.10	0.06~0.16	0.24	<b>SUM2-25</b>
26	15	34.57	12.7	2.00	1.29	0.20	0.07~0.17	0.46	<b>SUM2.5-25</b>
32	20	37.43	23.3	3.73	2.37	0.38	0.08~0.18	0.80	<b>SUM3-25</b>
43	25	55.29	53.2	8.79	5.43	0.90	0.12~0.27	1.72	<b>SUM4-25</b>

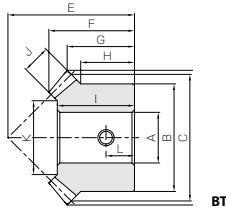
[Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 254) when performing modifications and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.

# SUMA Finished Bore Stainless Steel Miter Gears

Module 1 ~ 4

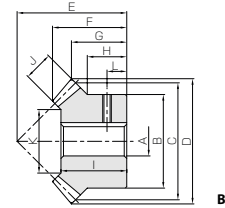


Specifications	
Precision grade	JIS B 1704 : 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	SUS303
Heat treatment	—
Tooth hardness	(less than 187HB)



Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length		Hub width	Length of bore
					A <sub>H7</sub>	B					G	H		
<b>SUMA1-20</b>	1	<b>m1</b>	20	BT	6	16	20	21.41	20	13.95	10.71	8	12	
<b>SUMA1.5-20</b>		<b>m1.5</b>	20	BT	8	26	30	32.12	30	21.24	16.06	13	19	
<b>SUMA2-20</b>		<b>m2</b>	20	BK	12	34	40	42.83	37	24.89	18.41	14	22	
<b>SUMA2.5-20</b>		<b>m2.5</b>	20	BK	14	42	50	53.54	48	32.54	24.77	19	29	
<b>SUMA3-20</b>		<b>m3</b>	20	BK	16	50	60	64.24	58	39.84	30.12	23	35	
<b>SUMA4-20</b>	<b>m4</b>	20	BK	20	64	80	85.65	75	50.78	37.83	27	45		
<b>SUMA1-25</b>	1	<b>m1</b>	25	BT	6	20	25	26.41	23	15.16	11.21	8	14	
<b>SUMA1.5-25</b>		<b>m1.5</b>	25	BT	10	30	37.5	39.62	34	22.25	16.31	11.5	19	
<b>SUMA2-25</b>		<b>m2</b>	25	BK	12	45	50	52.83	40	24.33	16.41	12.5	20	
<b>SUMA2.5-25</b>		<b>m2.5</b>	25	BK	16	55	62.5	66.04	50	30.41	20.52	15	26	
<b>SUMA3-25</b>		<b>m3</b>	25	BK	20	65	75	79.24	60	37.81	24.62	17.5	32	
<b>SUMA4-25</b>	<b>m4</b>	25	BK	30	80	100	105.66	80	49.32	32.83	20	43		

[Caution on Product Characteristics] ① Keyways are made according to JIS B1301 standards and Js 9 tolerances. For products with a tapped hole, a set screw is included as an accessory.  
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.



Face width	Holding surface dia.	Keyway	Set Screw	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)	Catalog No.
				Bending strength	Surface durability	Bending strength	Surface durability			
5	9.86	—	M4	4	0.49	0.060	0.050	0.0061	0.03~0.13	0.018
8	15.37	—	M4	6.5	1.72	0.22	0.18	0.022	0.05~0.15	0.073
10	21.72	4 x 1.8	M4	7	3.94	0.51	0.40	0.052	0.06~0.16	0.14
12	28.06	5 x 2.3	M5	9.5	7.52	1.00	0.77	0.10	0.07~0.17	0.29
15	31.57	5 x 2.3	M5	11.5	13.3	1.80	1.36	0.18	0.08~0.18	0.52
20	43.43	6 x 2.8	M5	13.5	31.5	4.39	3.22	0.45	0.12~0.27	1.14
6	15.03	—	M4	4	0.81	0.12	0.083	0.012	0.03~0.13	0.034
9	19.54	—	M4	6	2.74	0.41	0.28	0.042	0.05~0.15	0.11
12	26.06	4 x 1.8	M4	6.5	6.50	1.00	0.66	0.10	0.06~0.16	0.24
15	34.57	5 x 2.3	M5	7.5	12.7	2.00	1.29	0.20	0.07~0.17	0.46
20	37.43	6 x 2.8	M5	9	23.3	3.73	2.37	0.38	0.08~0.18	0.79
25	55.29	8 x 3.3	M6	10	53.2	8.79	5.43	0.90	0.12~0.27	1.67

[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.