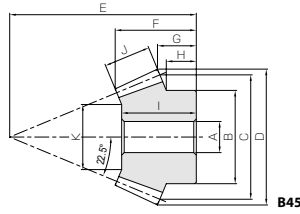


Specifications	
Precision grade	JIS B 1704 : 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)



Example of a pair Shaft angle 45°

Catalog No.	Gear ratio	Module	No. of teeth	Shaft angle	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length
						A _{H7}	B	C	D	E	F	G
SAM1.5-20045 SAM2-20045 SAM3-20045	1	m1.5	20	45°	B45	8	25	30	32.77	45	19.33	9.36
		m2	20	45°	B45	10	30	40	43.69	60	26.08	12.48
		m2.5	20	45°	B45	12	40	50	54.62	75	31.92	15.6
SAM1.5-20060 SAM2-20060 SAM3-20060	1	m1.5	20	60°	B60	8	25	30	32.59	40	22.3	14.77
		m2	20	60°	B60	12	32	40	43.46	50	26.39	16.36
		m2.5	20	60°	B60	14	40	50	54.33	60	30.49	17.94
SAM1.5-20120 SAM2-20120 SAM3-20120	1	m1.5	20	120°	B120	8	26	30	31.5	26	20.69	18.64
		m2	20	120°	B120	12	34	40	42	34	26.86	24.18
		m2.5	20	120°	B120	14	42	50	52.5	42	33.22	29.73
SAM1.5-20120 SAM2-20120 SAM3-20120	1	m3	20	120°	B120	16	50	60	63	50	39.39	35.28

- [Caution on Product Characteristics]
- The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 253 for more details.
 - 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.
 - The shaft angle of each product is the degree obtained when two of the same products are installed as a pair. Pairing two different products cannot change the shaft angle.

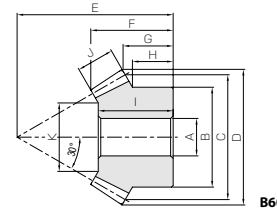


Shaft angle 60°

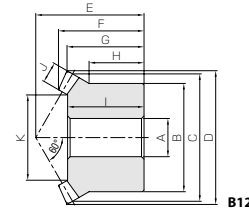


Shaft angle 120°

* For products not categorized in our KHK Stock Gear series, custom gear production services with **short lead times** is available. For details see page 8.



B60



B120

Hub width	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			
H	I	J	K							
7.75	18	11	17	4.30	0.38	0.44	0.039	0.05~0.15	0.067	SAM1.5-20045 SAM2-20045 SAM3-20045
9.65	24	15	20.92	10.3	0.95	1.05	0.097	0.06~0.16	0.15	
12.58	30	18	30.07	19.6	1.85	2.00	0.19	0.07~0.17	0.31	
15.51	36	22	34	34.4	3.30	3.51	0.34	0.08~0.18	0.55	
12.58	21	9	18.18	3.54	0.32	0.36	0.033	0.05~0.15	0.077	SAM1.5-20060 SAM2-20060 SAM3-20060
13.05	24	12	21.93	8.39	0.78	0.86	0.080	0.06~0.16	0.15	
13.82	28	15	29.15	16.4	1.56	1.67	0.16	0.07~0.17	0.27	
15.16	32	18	36.36	28.3	2.74	2.89	0.28	0.08~0.18	0.47	
13.88	18	5	19.22	2.43	0.29	0.25	0.030	0.05~0.15	0.073	SAM1.5-20120 SAM2-20120 SAM3-20120
17.26	24	6.5	26.78	5.66	0.70	0.58	0.072	0.06~0.16	0.16	
20.64	29	8.5	32.03	11.4	1.45	1.16	0.15	0.07~0.17	0.31	
24.02	35	10	39.59	19.4	2.53	1.98	0.26	0.08~0.18	0.53	

- [Caution on Secondary Operations]
- 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.

■ Angular Miter Gears

The shafts of standard Miter Gears are at 90°, Miter Gears with other angles are called Angular Miter Gears. SAM series of KHK standard Angular Miter Gears are available with 45°, 60°, 90° and 120° shaft angles. Recommended use of a pair of identical gears in mesh. Other shaft angles may be ordered as custom gears. However, because of the limitations of our manufacturing equipment, we may not be able to produce your specific design.

