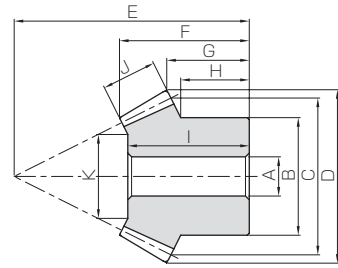
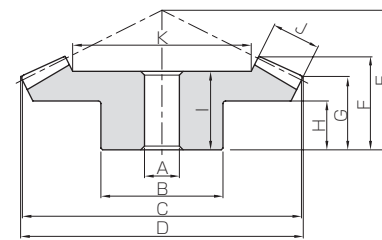




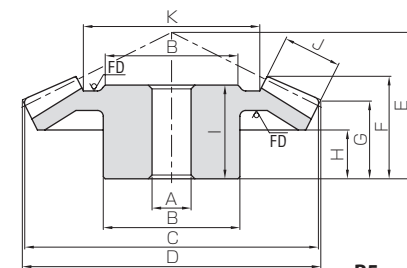
Specifications	
Precision grade	JIS B 1704 : 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



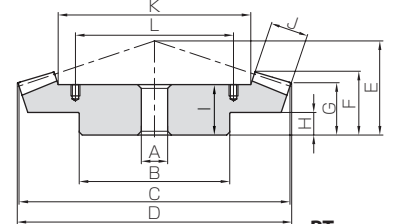
B3



B4



B5



BT

* FD has die-forged finish.

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
					A _{H7}	B	C	D	E	F	G	H
SB1.5-3020 SB1.5-2030	1.5	m1.5	30	B4	10	30	45	46.24	28	18.53	13.93	8
20			B3	8	25	30	33.13	33	18.63	11.54	8.83	
SB2-3020 SB2-2030		m2	30	B4	10	35	60	61.65	40	26.87	21.24	15
20			B3	10	30	40	44.18	45	25.06	16.39	11.67	
SB2.5-3020 SB2.5-2030		m2.5	30	B4	15	45	75	77.07	50	34.22	26.55	18
20			B3	12	35	50	55.22	55	31.06	19.24	12.5	
SB3-3020 SB3-2030		m3	30	B4	15	50	90	92.48	55	35.56	26.86	17
20			B3	15	45	60	66.27	70	40.48	27.09	20	
SB4-3020 SB4-2030	m4	30	B4	20	70	120	123.3	75	47.71	37.48	25	
20		B3	15	60	80	88.32	90	48.53	32.77	23.33		
SB5-3020 SB5-2030	m5	30	B4	25	90	150	154.13	90	58.45	43.1	24	
20		B3	20	80	100	110.45	110	62.11	38.48	28.33		
SB1.5-3015 SB1.5-1530	2	m1.5	30	B4	8	25	45	45.88	25	17.85	14.63	9
15			B3	6	16	22.5	26.11	32	17.23	10.4	7.88	
SB2-3015 SB2-1530		m2	30	B4	10	30	60	61.17	31	21.6	17.17	10
15			B3	8	22	30	34.81	40	20.59	11.2	8	
SB2.5-3015 SB2.5-1530		m2.5	30	B4	15	40	75	76.46	40	28.75	22.71	15
15			B3	12	30	37.5	43.51	55	31.81	19	15.63	
SB3-3015 SB3-1530		m3	30	B4	16	50	90	91.76	50	37.31	29.26	18
15			B3	12	35	45	52.22	70	43.88	26.8	22.5	
SB4-3015 SB4-1530	m4	30	B4	20	60	120	122.34	60	42.4	32.34	20	
15		B3	16	50	60	69.62	85	48.74	27.41	22.5		
SB5-3015 SB5-1530	m5	30	B5	20	70	150	152.93	75	52.5	40.43	25	
15		B3	20	60	75	87.03	110	63.61	38.01	31.25		
SB6-3015 SB6-1530	m6	30	B5	25	80	180	183.5	90	62.56	48.49	28	
15		B3	25	70	90	104.44	125	68.48	38.6	30		
SB2.5-3618 SB2.5-1836	2	m2.5	36	B4	15	55	90	91.46	43	28.52	21.96	13
18			B3	12	38	45	51.01	64	34.27	20.5	17.25	
SB3-3618 SB3-1836		m3	36	B4	20	60	108	109.76	52	34.95	26.76	17
18	B3		16	46	54	61.22	75	40.01	22.81	19		
SB4-3618 SB4-1836	m4	36	B4	20	70	144	146.34	72	49	38.34	25	
18		B3	20	60	72	81.62	100	52.77	30.41	25		
SB1-4020 SB1-2040	2	m1	40	B4	8	25	40	40.59	22	15.07	12.59	8
20			B3	6	16	20	22.41	28	13.78	8.6	7	
SB1.25-4020 SB1.25-2040		m1.25	40	B4	10	32	50	50.73	27	18.54	15.23	10
20			B3	8	22	25	28.01	36	18.66	11.75	10.25	
SB1.5-4020 SB1.5-2040		m1.5	40	B4	10	38	60	60.88	35	25.01	20.88	15
20			B3	8	25	30	33.61	46	25.54	16.9	14.75	
SB2-4020 SB2-2040		m2	40	B4	12	40	80	81.17	45	32.37	26.17	18
20			B3	12	32	40	44.81	60	34.16	21.2	18	
SB2.5-4020 SB2.5-2040		m2.5	40	B4	15	50	100	101.46	55	39.73	31.46	20
20			B3	12	40	50	56.01	75	43.78	26.5	22.5	
SB3-4020 SB3-2040		m3	40	B4	20	60	120	121.76	65	45.85	36.76	24
20			B3	16	50	60	67.22	90	50.81	31.8	27.5	
SB4-4020 SB4-2040	m4	40	B4	20	70	160	162.34	80	53.92	42.34	28	
20		B3	20	60	80	89.62	120	66.59	42.41	35		
SB5-4020 SB5-2040	m5	40	B5	25	100	200	202.93	90	55.33	42.93	26	
20		B3	20	80	100	112.03	140	68.92	43.01	35		
SB6-4020 SB6-2040	m6	40	B5	25	85	240	243.52	105	65.05	48.52	28	
20		B3	25	90	120	134.44	160	78.16	43.6	32.5		
SBY8-4020 SBY8-2040	m8	40	BT	35	180	320	324.69	130	75.36	54.69	25	
20		B3	30	120	160	179.25	210	98	54.81	40		

[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 303 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.
- ③ For convenience in handling, BT Shaped Gears have tapped holes on their holding surface. To find the L dimensions and tap sizes, please refer to Page 304.

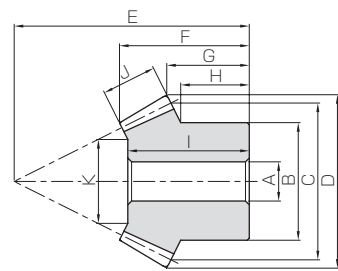
Length of bore	Face width	Holding surface dia.	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash	Weight	Catalog No.
I	J	K	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	
16 17	9	27.37 17.05	5.82 4.04	0.65 0.44	0.59 0.41	0.07 0.04	0.05~0.15	0.12 0.063	SB1.5-3020 SB1.5-2030
23 22	11	37.56 21.34	13.1 9.07	1.52 1.01	1.33 0.92	0.16 0.10	0.06~0.16	0.26 0.14	SB2-3020 SB2-2030
30 28	15	45.61 27.42	26.9 18.7	3.21 2.14	2.75 1.91	0.33 0.22	0.07~0.17	0.55 0.25	SB2.5-3020 SB2.5-2030
31 37	17	57.14 34.71	44.9 31.2	5.45 3.63	4.58 3.18	0.56 0.37	0.08~0.18	0.83 0.50	SB3-3020 SB3-2030
40 43	20	78.59 46.89	98.2 68.1	12.3 8.20	10.0 6.95	1.25 0.84	0.12~0.27	1.91 1.10	SB4-3020 SB4-2030
50 56	30	91.22 54.83	215 150	27.6 18.4	22.0 15.3	2.81 1.87	0.14~0.34	4.13 2.34	SB5-3020 SB5-2030
15 15.5	8	28.36 10.72	5.02 2.60	0.47 0.24	0.51 0.26	0.05 0.02	0.05~0.15	0.10 0.028	SB1.5-3015 SB1.5-1530
18 19	11	37.4 16.81	12.1 6.28	1.18 0.59	1.24 0.64	0.12 0.06	0.06~0.16	0.21 0.064	SB2-3015 SB2-1530
24 29	15	44.21 16.42	24.9 12.9	2.48 1.24	2.54 1.32	0.25 0.13	0.07~0.17	0.41 0.15	SB2.5-3015 SB2.5-1530
30 41	20	47.78 19.56	45.6 23.6	4.60 2.30	4.65 2.41	0.47 0.23	0.08~0.18	0.83 0.31	SB3-3015 SB3-1530
36 46	25	70.1 32.2	104 54.0	10.9 5.43	10.7 5.51	1.11 0.55	0.12~0.27	1.64 0.66	SB4-3015 SB4-1530
48 58	30	90.41 32.83	199 103	21.3 10.6	20.3 10.5	2.17 1.09	0.14~0.34	2.72 1.28	SB5-3015 SB5-1530
57 63	35	109.74 45.47	336 174	36.9 18.5	34.2 17.7	3.77 1.88	0.16~0.36	4.75 1.94	SB6-3015 SB6-1530
24 32	16	57.72 25.44	35.9 18.1	4.08 2.04	3.66 1.84	0.42 0.21	0.07~0.17	0.72 0.27	SB2.5-3618 SB2.5-1836
30 37	20	68.28 28.56	63.7 32.0	7.34 3.67	6.49 3.27	0.75 0.37	0.08~0.18	1.15 0.44	SB3-3618 SB3-1836
42 49	26	91.86 39.72	149 74.8	17.7 8.85	15.2 7.62	1.80 0.90	0.12~0.27	2.66 1.04	SB4-3618 SB4-1836
12 12	6	26.58 9.17	2.61 1.32	0.29 0.15	0.27 0.13	0.03 0.02	0.03~0.13	0.068 0.019	SB1-4020 SB1-2040
16 17	8	33.61 13.22	5.33 2.69	0.61 0.31	0.54 0.27	0.06 0.03	0.04~0.14	0.14 0.046	SB1.25-4020 SB1.25-2040
22 24	10	39.64 17.28	9.47 4.77	1.11 0.56	0.97 0.49	0.11 0.06	0.05~0.15	0.27 0.089	SB1.5-4020 SB1.5-2040
27 32	15	48.46 20.92	24.2 12.2	2.92 1.46	2.46 1.24	0.30 0.15	0.06~0.16	0.51 0.19	SB2-4020 SB2-2040
35 41	20	60.28 24.56	49.0 24.7	6.04 3.02	4.99 2.52	0.62 0.31	0.07~0.17	1.09 0.40	SB2.5-4020 SB2.5-2040
38 47	22	73.81 29.61	80.4 40.5	10.1 5.06	8.20 4.13	1.03 0.52	0.08~0.18	1.68 0.70	SB3-4020 SB3-2040
45 62	28	102.39 42.78	185 93.3	24.1 12.0	18.9 9.51	2.46 1.23	0.12~0.27	3.34 1.47	SB4-4020 SB4-2040
50 63	30	138.92 57.84	327 165	43.9 21.9	33.3 16.8	4.47 2.24	0.14~0.34	5.63 2.67	SB5-4020 SB5-2040
58 70	40	158.56 61.11	600 302	83.2 41.6	61.2 30.8	8.48 4.24	0.16~0.36	7.77 4.08	SB6-4020 SB6-2040
61 90	50	219.2 96.39	1350 679	196 98.1	138 69.3	20.0 10.0	0.20~0.45	25.75 9.41	SBY8-4020 SBY8-2040

[Caution on Secondary Operations]

- ① Please read "Caution on Performing Secondary Operations" (Page 304) 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.



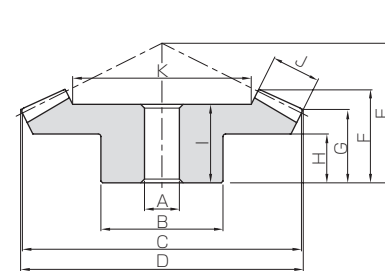
Specifications	
Precision grade	JIS B 1704 : 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



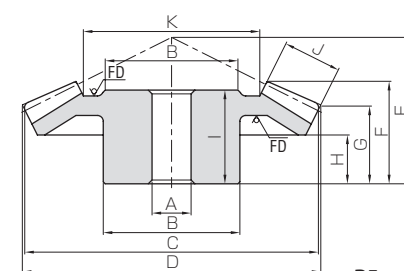
B3

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
					A _{H7}	B	C	D	E	F	G	H
SB1.5-6015	4	m1.5	60	B4	12	50	90	90.41	32	24.2	21.58	12
SB1.5-1560			15	B3	8	18	22.5	26.66	56	23.01	11.52	10.43
SB2-6015		m2	60	B4	15	60	120	120.55	42	31.6	28.1	16
SB2-1560			15	B3	10	24	30	35.55	75	31.01	15.69	14.25
SB2.5-6015		m2.5	60	B4	20	70	150	150.69	53	40	35.63	20
SB2.5-1560			15	B3	12	30	37.5	44.44	94	39.02	19.87	18.06
SB3-6015		m3	60	B4	20	80	180	180.83	64	47.97	43.15	25
SB3-1560			15	B3	15	38	45	53.33	112	44.1	23.04	21.12
SB4-6015		m4	60	B5	25	85	240	241.1	80	59.2	52.2	36
SB4-1560			15	B3	16	50	60	71.10	150	62.03	31.4	28.75
SBY5-6015	m5	60	BT	30	180	300	301.36	80	53.97	45.22	20	
SBY5-1560		15	B3	25	60	75	88.9	185	75.03	36.74	33.13	
SBY6-6015	m6	60	BT	35	200	360	361.66	100	68.16	58.31	25	
SBY6-1560		15	B3	25	75	90	106.66	220	85.17	42.08	38.13	

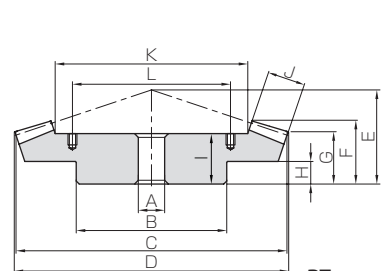
- [Caution on Product Characteristics]**
- ① The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 303 for more details.
 - ② Dimensions of the outside diameter, the overall length and crown to back length are all theoretical values, and some differences will occur due to the corner chamfering of the gear tips.
 - ③ For convenience in handling, BT Shaped Gears have tapped holes on their holding surface. To find the L dimensions and tap sizes, please refer to Page 304.



B4



B5



BT

* FD has die-forged finish.

Length of bore	Face width	Holding surface dia.	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog No.
I	J	K	Bending strength	Surface durability	Bending strength	Surface durability			
21 22.5	12	65.38 15.54	17.3 4.46	1.75 0.44	1.77 0.45	0.18 0.045	0.05~0.15	0.62 0.043	SB1.5-6015 SB1.5-1560
27 30	16	87.02 18.06	41.3 10.6	4.30 1.07	4.21 1.08	0.44 0.11	0.06~0.16	1.35 0.10	SB2-6015 SB2-1560
34 37.5	20	108.64 20.57	80.2 20.6	8.54 2.13	8.18 2.10	0.87 0.22	0.07~0.17	2.51 0.21	SB2.5-6015 SB2.5-1560
41 43	22	134.4 31.58	130 33.5	14.2 3.54	13.3 3.42	1.44 0.36	0.08~0.18	4.16 0.36	SB3-6015 SB3-1560
53 60	32	174.03 36.12	328 84.5	37.0 9.24	33.5 8.62	3.77 0.94	0.12~0.27	6.00 0.91	SB4-6015 SB4-1560
45 73	40	218.79 49.15	642 165	74.4 18.6	65.4 16.8	7.59 1.90	0.14~0.34	17.5 1.58	SBY5-6015 SBY5-1560
56 82	45	267.73 54.92	1050 270	126 31.5	107 27.5	12.8 3.21	0.16~0.36	30.7 2.83	SBY6-6015 SBY6-1560

- [Caution on Secondary Operations]** ① Please read “Caution on Performing Secondary Operations” (Page 304) 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.

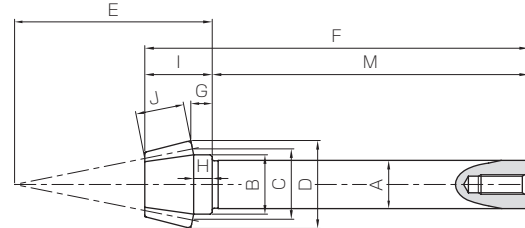


SB Steel Bevel Gears & Pinion Shafts



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

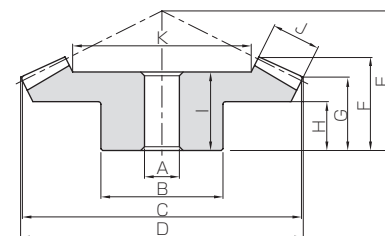
* Pinions are thermal refined. The hardness of a gear tooth is 200 to 270HB.



B8

Catalog No.	Gear ratio	Module	No. of teeth	Shape	Bore · Shaft dia.	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length	Hub width	Length of bore · shaft
					A _{H7} (Bore) A _{h7} (Shaft)								
SB1.5-6012 SB1.5-1260	5	m1.5	60	B4	12	50	90	90.33	30	23.89	21.82	12	21
			12	B8	12.2	15	18	22.24	50	97.06	5.42	4.7	17.06
m2		60	B4	15	60	120	120.43	40	31.85	29.09	16	27	
		12	B8	15.2	20	24	29.65	66	117.08	6.56	5.6	22.08	
m2.5		60	B4	20	70	150	150.54	50	39.81	36.36	20	34	
		12	B8	20.2	25	30	37.06	83	143.1	8.7	7.5	28.1	
SB3-6012 SB3-1260		m3	60	B4	20	80	180	180.65	60	47.43	43.64	25	41
			12	B8	25.25	30	36	44.48	100	172.19	10.85	9.4	32.19

- [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 303 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.



B4

Face width J	Holding surface dia. K	Shaft length M	Screw size	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog No.
				Bending strength	Surface durability	Bending strength	Surface durability			
12	65.52 —	— 80	— M5	18.0 4.01	1.41 0.46	1.83 0.41	0.14 0.047	0.05~0.15	0.62 0.097	SB1.5-6012 SB1.5-1260
16	86.96 —	— 95	— M6	42.6 9.50	3.43 1.12	4.34 0.97	0.35 0.11	0.06~0.16	1.34 0.19	SB2-6012 SB2-1260
20	108.8 —	— 115	— M8	83.2 18.5	6.85 2.23	8.48 1.89	0.70 0.23	0.07~0.17	2.54 0.40	SB2.5-6012 SB2.5-1260
22	134.73 —	— 140	— M8	135 30.1	11.4 3.70	13.8 3.07	1.16 0.38	0.08~0.18	4.18 0.74	SB3-6012 SB3-1260

- [Caution on Secondary Operations]** ① Please read “Caution on Performing Secondary Operations” (Page 304) 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.