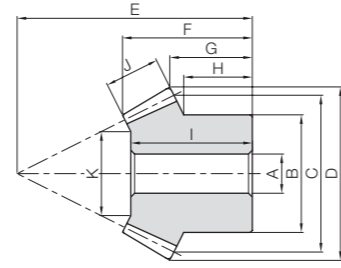
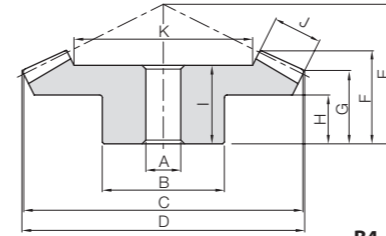




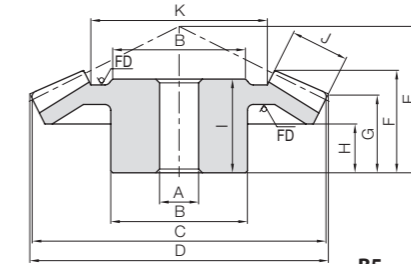
Specifications	
Precision grade	JIS B 1704: 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



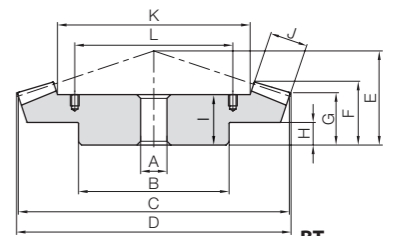
B3



B4



B5



BT

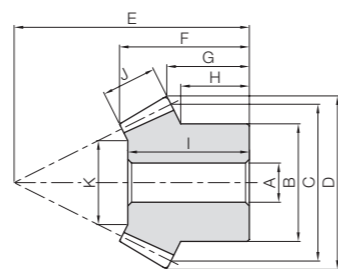
* FD has a forged finish surface.

Catalog Number	Gear Ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back		Hub width
					A _{H7}	B					C	D	
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	22.8	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			

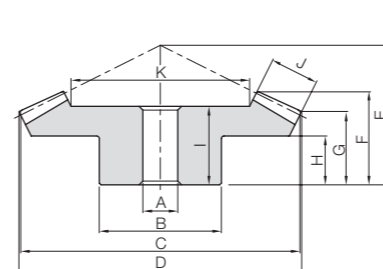
Hole length	Face width	Holding surface dia.	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)	Catalog Number
			Bending strength	Surface durability	Bending strength	Surface durability			
16	9	27.37	5.82	0.65	0.59	0.07	0.12	0.12	SB1.5-3020 SB1.5-2030
17		17.05	4.04	0.44	0.41	0.04			
23	11	37.56	13.1	1.52	1.33	0.16	0.26	0.26	SB2-3020 SB2-2030
22		21.34	9.07	1.01	0.92	0.10			
30	15	45.61	26.9	3.21	2.75	0.33	0.55	0.55	SB2.5-3020 SB2.5-2030
28		27.42	18.7	2.14	1.91	0.22			
31	17	57.14	44.9	5.45	4.58	0.56	0.83	0.83	SB3-3020 SB3-2030
37		34.71	31.2	3.63	3.18	0.37			
40	20	78.59	98.2	12.3	10.0	1.25	1.91	1.91	SB4-3020 SB4-2030
43		46.89	68.1	8.20	6.95	0.84			
50	30	91.22	215	27.6	22.0	2.81	4.13	4.13	SB5-3020 SB5-2030
56		54.83	150	18.4	15.3	1.87			
15	8	28.36	5.02	0.47	0.51	0.05	0.10	0.10	SB1.5-3015 SB1.5-1530
15.5		10.72	2.60	0.24	0.26	0.02			
18	11	37.4	12.1	1.18	1.24	0.12	0.21	0.21	SB2-3015 SB2-1530
19		16.81	6.28	0.59	0.64	0.06			
24	15	44.21	24.9	2.48	2.54	0.25	0.41	0.41	SB2.5-3015 SB2.5-1530
29		16.42	12.9	1.24	1.32	0.13			
30	20	47.78	45.6	4.60	4.65	0.47	0.83	0.83	SB3-3015 SB3-1530
41		19.56	23.6	2.30	2.41	0.23			
36	25	70.1	104	10.9	10.7	1.11	1.64	1.64	SB4-3015 SB4-1530
46		32.2	54.0	5.43	5.51	0.55			
48	30	90.41	199	21.3	20.3	2.17	2.72	2.72	SB5-3015 SB5-1530
58		32.83	103	10.6	10.5	1.09			
57	35	109.74	336	36.9	34.2	3.77	4.75	4.75	SB6-3015 SB6-1530
63		45.47	174	18.5	17.7	1.88			
24	16	57.72	35.9	4.08	3.66	0.42	0.72	0.72	SB2.5-3618 SB2.5-1836
32		25.44	18.1	2.04	1.84	0.21			
30	20	68.28	63.7	7.34	6.49	0.75	1.15	1.15	SB3-3618 SB3-1836
37		28.56	32.0	3.67	3.27	0.37			
42	26	91.86	149	17.7	15.2	1.80	2.66	2.66	SB4-3618 SB4-1836
49		39.72	74.8	8.85	7.62	0.90			
12	6	26.58	2.61	0.29	0.27	0.03	0.068	0.068	SB1-4020 SB1-2040
12		9.17	1.32	0.15	0.13	0.02			
16	8	33.61	5.33	0.61	0.54	0.06	0.14	0.14	SB1.25-4020 SB1.25-2040
17		13.22	2.69	0.31	0.27	0.03			
22	10	39.64	9.47	1.11	0.97	0.11	0.27	0.27	SB1.5-4020 SB1.5-2040
24		17.28	4.77	0.56	0.49	0.06			
27	15	48.46	24.2	2.92	2.46	0.30	0.51	0.51	SB2-4020 SB2-2040
32		20.92	12.2	1.46	1.24	0.15			
35	20	60.28	49.0	6.04	4.99	0.62	1.09	1.09	SB2.5-4020 SB2.5-2040
41		24.56	24.7	3.02	2.52	0.31			
38	22	73.81	80.4	10.1	8.20	1.03	1.68	1.68	SB3-4020 SB3-2040
47		29.61	40.5	5.06	4.13	0.52			
45	28	102.39	185	24.1	18.9	2.46	3.34	3.34	SB4-4020 SB4-2040
62		42.78	93.3	12.0	9.51	1.23			
50	30	138.92	327	43.9	33.3	4.47	5.63	5.63	SB5-4020 SB5-2040
63		57.84	165	21.9	16.8	2.24			
58	40	158.56	600	83.2	61.2	8.48	7.77	7.77	SB6-4020 SB6-2040
70		61.11	302	41.6	30.8	4.24			



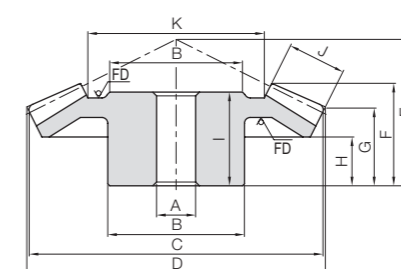
Specifications	
Precision grade	JIS B 1704: 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



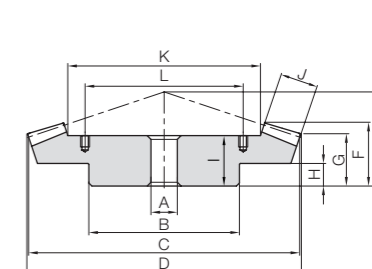
B3



B4



B5



BT

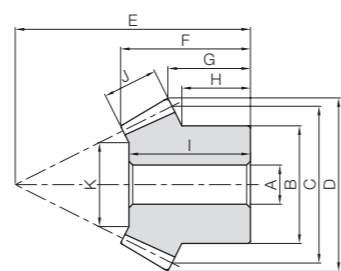
* FD has a forged finish surface.

Catalog Number	Gear Ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back		Hub width
					A _{H7}	B					C	D	
SB1-4518 SB1-1845	2.5	m1	45	B4	8	30	45	45.46	23	16.95	14.57	10	
18			B3	6	15	18	20.57	32	16.34	10.02	8.9		
SB1.25-4518 SB1.25-1845		m1.25	45	B4	10	34	56.25	56.82	26	18.53	15.46	10	
18			B3	8	19	22.5	25.72	40	20.66	12.52	11.17		
SB1.5-4518 SB1.5-1845		m1.5	45	B4	10	36	67.5	68.18	30	21.1	17.35	10	
18			B3	8	23	27	30.86	45	21.97	12.02	10.45		
SB2-4518 SB2-1845		m2	45	B4	12	48	90	90.91	40	27.91	23.14	15	
18			B3	10	32	36	41.15	60	28.69	16.03	14.2		
SB2.5-4518 SB2.5-1845		m2.5	45	B4	15	55	112.5	113.64	50	35.06	28.92	18	
18			B3	12	40	45	51.44	72	33.31	17.04	14.75		
SB3-4518 SB3-1845		m3	45	B4	20	65	135	136.37	60	41.86	34.71	22	
18			B3	16	48	54	61.72	85	38.04	19.05	16.3		
SB4-4518 SB4-1845		m4	45	B4	20	80	180	181.82	75	51.16	41.28	24	
18			B3	20	62	72	82.3	110	48.28	22.06	18		
SB5-4518 SB5-1845		m5	45	B4	25	100	225	227.28	90	59.43	47.85	28	
18			B3	20	80	90	102.87	135	55.82	25.07	20.5		
SB1-4515 SB1-1545	3	m1	45	B4	8	30	45	45.37	17	11.77	10.06	5	
15			B3	6	12	15	17.67	29	12.51	6.95	6		
SB1.25-4515 SB1.25-1545		m1.25	45	B4	10	34	56.25	56.72	21	14.61	12.33	6	
15			B3	8	15	18.75	22.09	36	15.85	8.43	7.25		
SB1.5-4515 SB1.5-1545		m1.5	45	B4	10	36	67.5	68.06	28	20.44	17.59	11	
15			B3	8	18	22.5	26.54	47	23.19	13.92	12.5		
SB2-4515 SB2-1545		m2	45	B4	12	40	90	90.75	40	30.4	26.12	17	
15			B3	10	24	30	35.35	60	29.8	15.89	14		
SB2.5-4515 SB2.5-1545		m2.5	45	B4	15	50	112.5	113.43	50	38.35	32.65	22	
15			B3	12	30	37.5	44.18	75	38.41	19.86	17.5		
SB3-4515 SB3-1545		m3	45	B4	20	60	135	136.12	55	40.74	34.18	20	
15			B3	15	38	45	53.02	90	45.17	23.84	21.33		
SB4-4515 SB4-1545		m4	45	B5	20	80	180	181.5	70	50.79	42.24	24	
15			B3	16	50	60	70.69	115	54.6	26.78	23.33		
SB5-4515 SB5-1545		m5	45	B5	25	90	225	226.87	75	50.28	40.3	20	
15			B3	20	60	75	88.37	145	67.19	34.73	30		
SB6-4515 SB6-1545	m6	45	BT	30	160	270	272.24	100	72.62	58.36	30		
15		B3	25	70	90	106.03	175	89.04	42.67	36.67			
SBY8-4515 SBY8-1545	m8	45	BT	35	200	360	362.99	125	83.74	69.49	30		
15		B3	30	100	120	141.39	230	99.93	53.56	46.67			

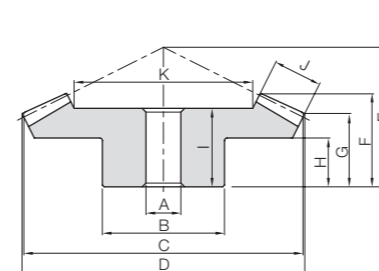
Hole length	Face width	Holding surface dia.	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number
			Bending strength	Surface durability	Bending strength	Surface durability			
15	7	30.73	3.35	0.35	0.34	0.04	0.03~0.13	0.11	SB1-4518 SB1-1845
15.5		10.31	1.33	0.14	0.14	0.01			
16	9	37.86	6.67	0.72	0.68	0.07	0.04~0.14	0.17	SB1.25-4518 SB1.25-1845
19.5		12.16	2.65	0.29	0.27	0.03			
18	11	45	11.7	1.29	1.19	0.13	0.05~0.15	0.28	SB1.5-4518 SB1.5-1845
21		16.51	4.64	0.51	0.47	0.05			
25	14	62.24	26.8	3.05	2.74	0.31	0.06~0.16	0.65	SB2-4518 SB2-1845
27.5		23.11	10.7	1.22	1.09	0.12			
31	18	76.53	53.4	6.20	5.44	0.63	0.07~0.17	1.23	SB2.5-4518 SB2.5-1845
31.5		26.82	21.2	2.48	2.16	0.25			
37	21	92.96	90.5	10.7	9.23	1.09	0.08~0.18	2.05	SB3-4518 SB3-1845
36		33.41	36.0	4.29	3.67	0.44			
45	29	122.33	220	26.8	22.4	2.73	0.12~0.27	4.69	SB4-4518 SB4-1845
46		45.83	87.3	10.7	8.91	1.09			
51	34	156.56	411	51.8	41.9	5.28	0.14~0.34	8.31	SB5-4518 SB5-1845
52.5		56.9	164	20.7	16.7	2.11			
9	6	32.02	2.84	0.27	0.29	0.027	0.03~0.13	0.078	SB1-4515 SB1-1545
12		10.05	0.98	0.09	0.10	0.0091			
12	8	39.63	5.80	0.56	0.59	0.057	0.04~0.14	0.15	SB1.25-4515 SB1.25-1545
15		10.9	2.00	0.19	0.20	0.019			
17	10	46.58	10.3	1.02	1.05	0.10	0.05~0.15	0.25	SB1.5-4515 SB1.5-1545
22.5		14.75	3.56	0.34	0.36	0.035			
26	15	59.04	26.4	2.68	2.69	0.27	0.06~0.16	0.60	SB2-4515 SB2-1545
29		19.13	9.10	0.89	0.93	0.091			
35	20	72.84	53.6	5.55	5.46	0.57	0.07~0.17	1.22	SB2.5-4515 SB2.5-1545
37		20.51	18.5	1.85	1.89	0.19			
35	23	88.18	90.2	9.53	9.20	0.97	0.08~0.18	1.99	SB3-4515 SB3-1545
43		22.53	31.2	3.18	3.18	0.32			
45	30	118.09	211	23.0	21.5	2.35	0.12~0.27	3.89	SB4-4515 SB4-1545
52		32.26	72.8	7.67	7.43	0.78			
44	35	152.88	394	44.3	40.2	4.52	0.14~0.34	6.10	SB5-4515 SB5-1545
65		48.64	136	14.8	13.9	1.51			
62	50	169.26	751	87.0	76.6	8.87	0.16~0.36	18.0	SB6-4515 SB6-1545
86		49.77	259	39.9	26.4	4.06			
67	50	255.92	1470	179	150	18.3	0.20~0.45	36.4	SBY8-4515 SBY8-1545
93		61.77	506	59.7	51.6	6.09			



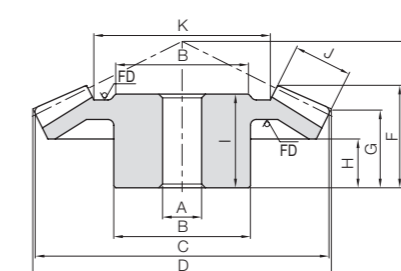
Specifications	
Precision grade	JIS B 1704: 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



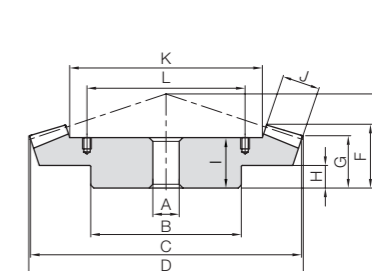
B3



B4



B5



BT

* FD has a forged finish surface.

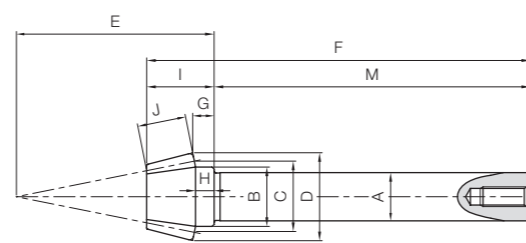
Catalog Number	Gear Ratio	Module	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back		Hub width
					A _{H7}	B					C	D	
SB1.5-6015 SB1.5-1560	4	m1.5	60	B4	12	50	90	90.41	32	24.2	21.58	12	
15			B3	8	18	22.5	26.66	56	23.01	11.52	10.43		
SB2-6015 SB2-1560		m2	60	B4	15	60	120	120.55	42	31.6	28.1	16	
15			B3	10	24	30	35.55	75	31.01	15.69	14.25		
SB2.5-6015 SB2.5-1560		m2.5	60	B4	20	70	150	150.69	53	40	35.63	20	
15			B3	12	30	37.5	44.44	94	39.02	19.87	18.06		
SB3-6015 SB3-1560		m3	60	B4	20	80	180	180.83	64	47.97	43.15	25	
15			B3	15	38	45	53.33	112	44.1	23.04	21.12		
SB4-6015 SB4-1560		m4	60	B5	25	85	240	241.1	80	59.2	52.2	36	
15			B3	16	50	60	71.1	150	62.03	31.4	28.75		
SBY5-6015 SBY5-1560		m5	60	BT	30	180	300	301.36	80	53.97	45.22	20	
15			B3	25	60	75	88.9	185	75.03	36.74	33.13		
SBY6-6015 SBY6-1560	m6	60	BT	35	200	360	361.66	100	68.16	58.31	25		
15		B3	25	75	90	106.66	220	85.17	42.08	38.13			

Hole length	Face width	Holding surface dia.	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number
			Bending strength	Surface durability	Bending strength	Surface durability			
21	12	65.38	17.3	1.75	1.77	0.18	0.05~0.15	0.62	SB1.5-6015 SB1.5-1560
22.5			4.46	0.44	0.45	0.045			
27	16	87.02	41.3	4.30	4.21	0.44	0.06~0.16	1.35	SB2-6015 SB2-1560
30			10.6	1.07	1.08	0.11			
34	20	108.64	80.2	8.54	8.18	0.87	0.07~0.17	2.51	SB2.5-6015 SB2.5-1560
37.5			20.6	2.13	2.10	0.22			
41	22	134.4	130	14.2	13.3	1.44	0.08~0.18	4.16	SB3-6015 SB3-1560
43			33.5	3.54	3.42	0.36			
53	32	174.03	328	37.0	33.5	3.77	0.12~0.27	6.00	SB4-6015 SB4-1560
60			84.5	9.24	8.62	0.94			
45	40	218.79	642	74.4	65.4	7.59	0.14~0.34	17.5	SBY5-6015 SBY5-1560
73			165	18.6	16.8	1.90			
56	45	267.73	1050	126	107	12.8	0.16~0.36	30.7	SBY6-6015 SBY6-1560
82			270	31.5	27.5	3.21			

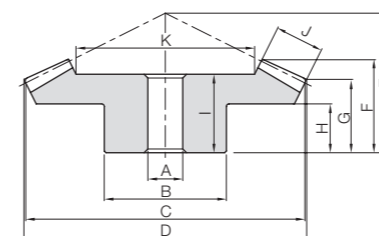


Specifications	
Precision grade	JIS B 1704: 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—*
Tooth hardness	(less than 194HB)*
Surface treatment	Black oxide coating

* The pinion is tempered and has the teeth hardness of 200 to 270 HB.



B8



B4

Catalog Number	Gear Ratio	Module	No. of teeth	Shape	Bore/Shaft Dia.		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back	Hub width	Length of bore and 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	
SB2-6012 SB2-1260		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	
SB2.5-6012 SB2.5-1260		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		

Face width	Holding surface dia.	Length of shaft	Socket head screw Size	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number
				Bending strength	Surface durability	Bending strength	Surface durability			
12	65.52	80	M5	18.0	1.41	1.83	0.14	0.05~0.15	0.62	SB1.5-6012 SB1.5-1260
				4.01	0.46	0.41	0.047			
16	86.96	95	M6	42.6	3.43	4.34	0.35	0.06~0.16	1.34	SB2-6012 SB2-1260
				9.50	1.12	0.97	0.11			
20	108.8	115	M8	83.2	6.85	8.48	0.70	0.07~0.17	2.54	SB2.5-6012 SB2.5-1260
				18.5	2.23	1.89	0.23			
22	134.73	140	M8	135	11.4	13.8	1.16	0.08~0.18	4.18	SB3-6012 SB3-1260
				30.1	3.70	3.07	0.38			

