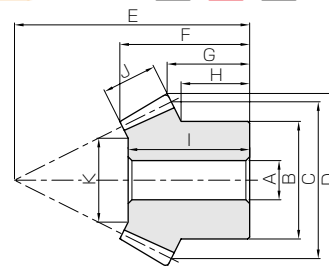




Specifications	
Precision grade	JIS B 1704 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35°
Material	S45C
Heat treatment	Teeth induction hardened
Tooth hardness	45 ~ 55HRC



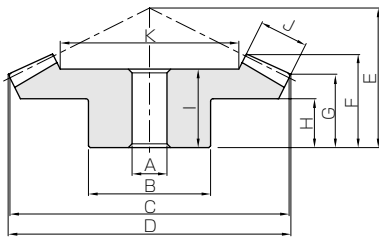
B3

Catalog No.	Gear ratio	Module	No. of teeth	Direction of spiral	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length
						A	B					
SBS2-3020R SBS2-2030L	1.5	m2	30	R	B4	12	35	60	61.36	40	26.8	21.02
20			L	B3	10	30	40	43.49	45	24.96	16.16	
SBS2.5-3020R SBS2.5-2030L		m2.5	30	R	B4	15	45	75	77.09	50	33.86	26.56
20			L	B3	12	40	50	54.43	55	30.88	18.98	
SBS3-3020R SBS3-2030L		m3	30	R	B4	16	50	90	92.21	55	35.34	26.66
20			L	B3	16	45	60	65.58	70	40.17	26.86	
SBS4-3020R SBS4-2030L		m4	30	R	B4	20	70	120	122.85	75	47.49	37.14
20			L	B3	20	60	80	87.34	90	48.17	32.45	
SBS5-3020R SBS5-2030L		m5	30	R	B4	25	90	150	153.67	90	58.08	42.75
20			L	B3	22	80	100	109.2	110	61.62	38.07	
SBS1-4020R SBS1-2040L	2	m1	40	R	B4	8	25	40	40.52	22	15.02	12.52
20			L	B3	6	16	20	22.08	28	13.73	8.52	
SBS1.5-4020R SBS1.5-2040L		m1.5	40	R	B4	10	38	60	60.75	35	24.93	20.75
20			L	B3	8	25	30	33.08	46	25.45	16.77	
SBS2-4020R SBS2-2040L		m2	40	R	B4	12	40	80	81	45	32.27	26
20			L	B3	12	32	40	44.1	60	34.04	21.02	
SBS2.5-4020R SBS2.5-2040L		m2.5	40	R	B4	15	50	100	101.27	55	39.65	31.27
20			L	B3	12	40	50	55.21	75	43.61	26.30	
SBS3-4020R SBS3-2040L		m3	40	R	B4	20	60	120	121.48	65	45.76	36.48
20			L	B3	16	50	60	66.06	90	50.63	31.52	
SBS4-4020R SBS4-2040L	m4	40	R	B4	20	70	160	162.07	80	53.69	42.07	
20		L	B3	20	60	80	88.50	120	66.24	42.12		
SBS5-4020R SBS5-2040L	m5	40	R	B5	25	100	200	202.54	90	55.02	42.54	
20		L	B3	22	80	100	110.45	140	68.48	42.61		
SBS2.5-3618R SBS2.5-1836L	2	m2.5	36	R	B4	15	55	90	91.29	43	28.38	21.79
18			L	B3	12	38	45	50.30	64	34.06	20.32	
SBS3-3618R SBS3-1836L		m3	36	R	B4	20	60	108	109.53	52	34.82	26.53
18			L	B3	16	46	54	60.28	75	39.79	22.57	
SBS4-3618R SBS4-1836L		m4	36	R	B4	20	70	144	145.99	72	48.84	37.99
18			L	B3	20	60	72	80.19	100	52.51	30.05	
SBS2-4518R SBS2-1845L	2.5	m2	45	R	B4	12	48	90	90.79	40	27.67	22.98
18			L	B3	10	32	36	40.42	60	28.54	15.88	
SBS2.5-4518R SBS2.5-1845L		m2.5	45	R	B4	15	55	112.5	113.49	50	34.94	28.74
18			L	B3	12	40	45	50.35	72	33.19	16.82	
SBS3-4518R SBS3-1845L		m3	45	R	B4	20	65	135	136.24	60	41.65	34.55
18			L	B3	16	48	54	60.69	85	37.82	18.84	
SBS4-4518R SBS4-1845L		m4	45	R	B4	25	80	180	181.57	75	50.98	40.96
18			L	B3	20	62	72	80.86	110	48.03	21.77	
SBS5-4518R SBS5-1845L		m5	45	R	B4	30	100	225	225.81	90	57.9	46.01
18			L	B3	22	80	90	103.87	135	56.02	25.27	

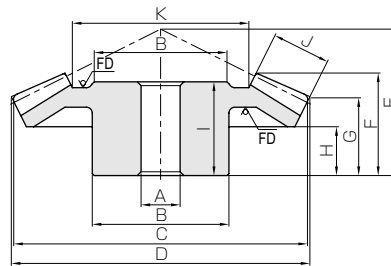
[Caution on Product Characteristics]

- ① The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 451 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 These gears produce axial thrust forces. See page 452 for more details.
- ④ Due to heat treating, some deformation of the bore may occur. It may be necessary to ream the bore to bring it to the stated dimensions.

Spiral Bevel Gears



B4



B5

* FD has die-forged finish.

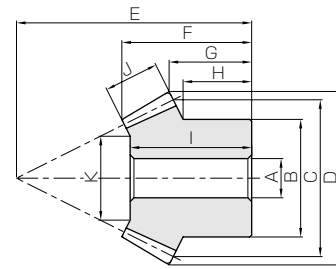
Hub width H	Length of bore I	Face width J	Holding surface dia. K	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog No.
				Bending strength	Surface durability	Bending strength	Surface durability			
15 11.67	23 22	11	37.56 21.34	15.4 10.5	11.3 7.52	1.57 1.07	1.15 0.77	0.06~0.16	0.26 0.13	SBS2-3020R SBS2-2030L
18 14.17	30 28	15	45.61 27.42	31.7 21.6	23.6 15.7	3.23 2.20	2.40 1.60	0.07~0.17	0.55 0.28	SBS2.5-3020R SBS2.5-2030L
17 20	31 37	17	57.14 34.71	52.9 36.1	39.7 26.5	5.39 3.68	4.05 2.70	0.08~0.18	0.82 0.49	SBS3-3020R SBS3-2030L
25 23.33	40 43	20	78.59 46.89	115 78.7	88.1 58.8	11.8 8.03	8.99 5.99	0.12~0.27	1.90 1.05	SBS4-3020R SBS4-2030L
24 28.33	50 56	30	91.22 54.83	253 173	195 130	25.8 17.6	19.9 13.3	0.14~0.34	4.11 2.29	SBS5-3020R SBS5-2030L
8 7	12 12	6	26.58 9.17	3.01 1.51	2.22 1.11	0.31 0.15	0.23 0.11	0.03~0.13	0.068 0.019	SBS1-4020R SBS1-2040L
15 14.75	22 24	10	39.64 17.28	10.9 5.46	8.22 4.11	1.11 0.56	0.84 0.42	0.05~0.15	0.27 0.088	SBS1.5-4020R SBS1.5-2040L
18 18	27 32	15	48.46 20.92	27.8 13.9	21.3 10.7	2.83 1.42	2.17 1.09	0.06~0.16	0.51 0.19	SBS2-4020R SBS2-2040L
20 22.5	34 40	20	59.28 20.56	56.4 28.2	43.7 21.9	5.75 2.88	4.46 2.23	0.07~0.17	1.06 0.40	SBS2.5-4020R SBS2.5-2040L
24 27.5	38 47	22	73.81 29.61	92.5 46.4	72.6 36.3	9.44 4.73	7.40 3.70	0.08~0.18	1.67 0.69	SBS3-4020R SBS3-2040L
28 35	45 62	28	102.39 42.78	213 107	170 84.8	21.7 10.9	17.3 8.65	0.12~0.27	3.33 1.46	SBS4-4020R SBS4-2040L
26 35	50 63	30	138.92 57.84	376 188	302 151	38.3 19.2	30.8 15.4	0.14~0.34	5.67 2.61	SBS5-4020R SBS5-2040L
13 17.25	24 32	16	57.72 25.45	41.7 20.9	29.3 14.7	4.26 2.13	2.99 1.49	0.07~0.17	0.72 0.27	SBS2.5-3618R SBS2.5-1836L
17 19	30 37	20	68.27 28.56	74.0 37.0	52.4 26.2	7.54 3.78	5.35 2.67	0.08~0.18	1.15 0.44	SBS3-3618R SBS3-1836L
25 25	42 49	26	91.87 39.72	173 86.4	124 62.1	17.6 8.81	12.7 6.33	0.12~0.27	2.65 1.03	SBS4-3618R SBS4-1836L
15 14.2	25 27.5	14	62.24 23.11	31.0 12.2	21.9 8.74	3.16 1.24	2.23 0.89	0.06~0.16	0.65 0.15	SBS2-4518R SBS2-1845L
18 14.75	31 31.5	18	76.53 26.82	61.6 24.2	44.0 17.6	6.28 2.47	4.49 1.80	0.07~0.17	1.23 0.28	SBS2.5-4518R SBS2.5-1845L
22 16.3	37 36	21	92.96 33.41	104 41.0	75.4 30.2	10.7 4.18	7.69 3.07	0.08~0.18	2.05 0.45	SBS3-4518R SBS3-1845L
24 18	45 46	29	122.33 45.83	253 99.5	185 74.1	25.8 10.2	18.9 7.56	0.12~0.27	4.62 1.00	SBS4-4518R SBS4-1845L
28 20.5	51 52.5	34	156.56 56.9	474 186	350 140	48.4 19.0	35.7 14.3	0.14~0.34	8.11 1.94	SBS5-4518R SBS5-1845L

[Caution on Secondary Operations]

- ① Please read "Caution on Performing Secondary Operations" (Page 452) 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).



Specifications	
Precision grade	JIS B 1704 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35°
Material	S45C
Heat treatment	Teeth induction hardened
Tooth hardness	45 ~ 55HRC



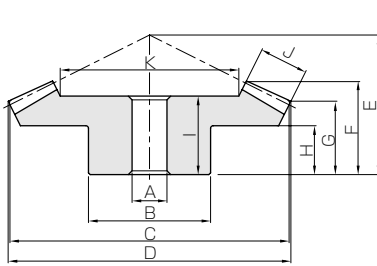
B3

Catalog No.	Gear ratio	Module	No. of teeth	Direction of spiral	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back length
						A	B	C	D	E	F	G
SBS2-4515R SBS2-1545L	3	m2	45	R	B4	12	40	90	90.67	40	30.29	26.01
			15	L	B3	10	24	30	34.78	60	29.66	15.80
SBS2.5-4515R SBS2.5-1545L		m2.5	45	R	B4	15	50	112.5	113.32	50	38.25	32.47
			15	L	B3	12	30	37.5	43.36	75	38.27	19.73
SBS3-4515R SBS3-1545L		m3	45	R	B4	20	60	135	135.99	55	40.59	33.98
			15	L	B3	15	38	45	52.08	90	44.98	23.68
SBS4-4515R SBS4-1545L		m4	45	R	B5	20	80	180	181.3	70	50.62	41.95
			15	L	B3	16	50	60	69.30	115	54.37	26.55
SBS5-4515R SBS5-1545L		m5	45	R	B5	30	90	225	226.61	75	50.05	39.92
			15	L	B3	20	60	75	86.55	145	66.89	34.43
SBS1.5-6015R SBS1.5-1560L	4	m1.5	60	R	B4	12	60	90	90.36	32	24.08	21.48
			15	L	B3	8	18	22.5	26.09	56	22.95	11.45
SBS2-6015R SBS2-1560L		m2	60	R	B4	15	80	120	120.46	42	31.5	27.91
			15	L	B3	10	24	30	34.68	75	30.94	15.58
SBS2.5-6015R SBS2.5-1560L		m2.5	60	R	B4	20	100	150	150.5	53	39.68	35.24
			15	L	B3	12	30	37.5	44.16	94	38.9	19.83
SBS3-6015R SBS3-1560L		m3	60	R	B4	20	120	180	180.57	64	47.61	42.64
			15	L	B3	15	38	45	52.64	112	44.01	22.96

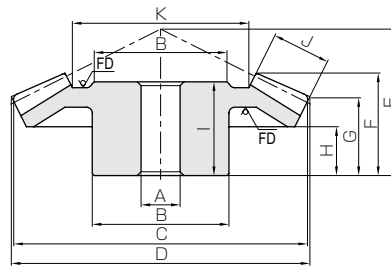
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- ③ These gears produce axial thrust forces. See page 452 for more details.
- ④ Due to heat treating, some deformation of the bore may occur. It may be necessary to ream the bore to bring it to the stated dimensions.

Spiral Bevel Gears



B4



B5

* FD has die-forged finish.

Hub width H	Length of bore I	Face width J	Holding surface dia. K	Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)	Catalog No.
				Bending strength	Surface durability	Bending strength	Surface durability			
17 14	26 29	15	59.04 19.13	31.7 10.1	18.8 6.27	3.23 1.03	1.92 0.64	0.06~0.16	0.60 0.095	SBS2-4515R SBS2-1545L
22 17.5	35 37	20	72.82 20.51	64.3 20.6	38.7 12.9	6.56 2.10	3.94 1.31	0.07~0.17	1.21 0.19	SBS2.5-4515R SBS2.5-1545L
20 21.33	35 44	23	88.18 28.54	108 34.7	65.8 21.9	11.1 3.54	6.71 2.24	0.08~0.18	1.99 0.34	SBS3-4515R SBS3-1545L
24 23.33	45 52	30	118.08 32.26	253 81.1	156 52.0	25.8 8.27	15.9 5.30	0.12~0.27	4.04 0.76	SBS4-4515R SBS4-1545L
20 30	44 65	35	152.88 48.64	473 152	295 98.2	48.3 15.5	30.0 10.0	0.14~0.34	6.08 1.44	SBS5-4515R SBS5-1545L
12 10.43	21 22.5	12	65.39 15.55	20.7 4.89	12.3 3.07	2.12 0.50	1.25 0.31	0.05~0.15	0.70 0.042	SBS1.5-6015R SBS1.5-1560L
16 14.25	27 30	16	87.02 18.06	49.2 11.6	29.6 7.39	5.01 1.18	3.01 0.75	0.06~0.16	1.59 0.10	SBS2-6015R SBS2-1560L
20 18.06	34 37.5	20	108.64 20.58	96.1 22.6	58.4 14.6	9.79 2.31	5.95 1.49	0.07~0.17	3.13 0.20	SBS2.5-6015R SBS2.5-1560L
25 21.12	41 43	22	134.4 31.58	156 36.8	95.7 23.9	15.9 3.75	9.76 2.44	0.08~0.18	5.38 0.35	SBS3-6015R SBS3-1560L

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Spur
GearsHelical
GearsInternal
Gears

Racks

CP Racks
& PinionsMiter
GearsBevel
GearsScrew
GearsWorm
Gear PairBevel
GearboxesOther
Products