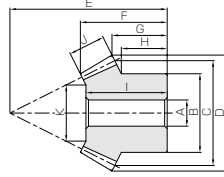
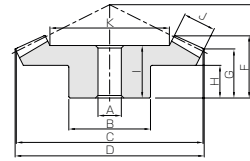




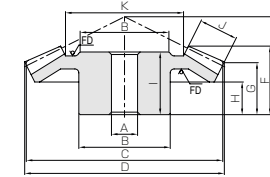
Specifications	
Precision grade	JIS B 1704: 1978 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35°
Material	S45C
Heat treatment	Teeth induction hardened
Tooth hardness	50 ~ 60HRC



B3



B4



B5

* FD has die-forged finish.

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				F	G	
SBS2-3020R SBS2-2030L		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	1.5	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		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	2	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]
- The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 283 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.
 - These gears produce axial thrust forces. See Page 284 for more details.
 - 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.

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			
15	23	11	37.56	15.4	11.3	1.57	1.15	0.06~0.16	0.26	SBS2-3020R SBS2-2030L
11.67	22		21.34	10.5	7.52	1.07	0.77			
18	30	15	45.61	31.7	23.6	3.23	2.40	0.07~0.17	0.55	SBS2.5-3020R SBS2.5-2030L
14.17	28		27.42	21.6	15.7	2.20	1.60			
17	31	17	57.14	52.9	39.7	5.39	4.05	0.08~0.18	0.82	SBS3-3020R SBS3-2030L
20	37		34.71	36.1	26.5	3.68	2.70			
25	40	20	78.59	115	88.1	11.8	8.99	0.12~0.27	1.90	SBS4-3020R SBS4-2030L
23.33	43		46.89	78.7	58.8	8.03	5.99			
24	50	30	91.22	253	195	25.8	19.9	0.14~0.34	4.11	SBS5-3020R SBS5-2030L
28.33	56		54.83	173	130	17.6	13.3			
8	12	6	26.58	3.01	2.22	0.31	0.23	0.03~0.13	0.068	SBS1-4020R SBS1-2040L
7	12		9.17	1.51	1.11	0.15	0.11			
15	22	10	39.64	10.9	8.22	1.11	0.84	0.05~0.15	0.27	SBS1.5-4020R SBS1.5-2040L
14.75	24		17.28	5.46	4.11	0.56	0.42			
18	27	15	48.46	27.8	21.3	2.83	2.17	0.06~0.16	0.51	SBS2-4020R SBS2-2040L
18	32		20.92	13.9	10.7	1.42	1.09			
20	34	20	59.28	56.4	43.7	5.75	4.46	0.07~0.17	1.06	SBS2.5-4020R SBS2.5-2040L
22.5	40		20.56	28.2	21.9	2.88	2.23			
24	38	22	73.81	92.5	72.6	9.44	7.40	0.08~0.18	1.67	SBS3-4020R SBS3-2040L
27.5	47		29.61	46.4	36.3	4.73	3.70			
28	45	28	102.39	213	170	38.3	30.8	0.12~0.27	3.33	SBS4-4020R SBS4-2040L
35	62		42.78	107	84.8	19.2	15.4			
26	50	30	138.92	376	302	38.3	30.8	0.14~0.34	5.67	SBS5-4020R SBS5-2040L
35	63		57.84	188	151	19.2	15.4			
13	24	16	57.72	41.7	29.3	4.26	2.99	0.07~0.17	0.72	SBS2.5-3618R SBS2.5-1836L
17.25	32		25.45	20.9	14.7	2.13	1.49			
17	30	20	68.27	74.0	52.4	7.54	5.35	0.08~0.18	1.15	SBS3-3618R SBS3-1836L
19	37		28.56	37.0	26.2	3.78	2.67			
25	42	26	91.87	173	124	17.6	12.7	0.12~0.27	2.65	SBS4-3618R SBS4-1836L
25	49		39.72	86.4	62.1	8.81	6.33			
15	25	14	62.24	31.0	21.9	3.16	2.23	0.06~0.16	0.65	SBS2-4518R SBS2-1845L
14.2	27.5		23.11	12.2	8.74	1.24	0.89			
18	31	18	76.53	61.6	44.0	6.28	4.49	0.07~0.17	1.23	SBS2.5-4518R SBS2.5-1845L
14.75	31.5		26.82	24.2	17.6	2.47	1.80			
22	37	21	92.96	104	75.4	10.7	7.69	0.08~0.18	2.05	SBS3-4518R SBS3-1845L
16.3	36		33.41	41.0	30.2	4.18	3.07			
24	45	29	122.33	253	185	25.8	18.9	0.12~0.27	4.62	SBS4-4518R SBS4-1845L
18	46		45.83	99.5	74.1	10.2	7.56			
28	51	34	156.56	474	350	48.4	35.7	0.14~0.34	8.11	SBS5-4518R SBS5-1845L
20.5	52.5		56.9	186	140	19.0	14.3			

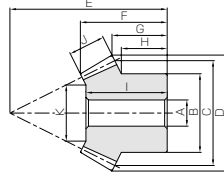
- [Caution on Secondary Operations]
- Please read "Caution on Performing Secondary Operations" (Page 284) when performing modification and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.
 - Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).

* 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.



Specifications	
Precision grade	JIS B 1704: 1978 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35° ±
Material	S45C
Heat treatment	Teeth induction hardened
Tooth hardness	50 ~ 60HRC

* 39° for 6015R and 1560L of SBS1.5/2 products.

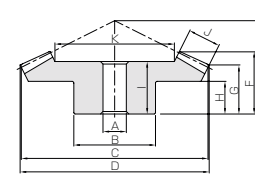


B3

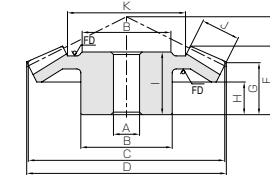
Catalog No.	Gear ratio	Module	No. of teeth	Direction of spiral	Shape	Bore		Pitch dia.	Outside dia.	Mounting distance	Total length		Crown to back length	
						A	B				F	G		
SBS2-4515R SBS2-1545L	3	m2	45	R	B4	12	40	90	90.67	40	30.29	26.01		
15			L	B3	10	24	30	34.78	60	29.66	15.80			
SBS2.5-4515R SBS2.5-1545L		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			

[Caution on Product Characteristics]

- The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 283 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.
- These gears produce axial thrust forces. See Page 284 for more details.
- 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.



B4



B5

* FD has die-forged finish.

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							
17	26	15	59.04	31.7	18.8	3.23	1.92	0.06~0.16	0.60	SBS2-4515R SBS2-1545L
14	29	15	19.13	10.1	6.27	1.03	0.64		0.095	
22	35	20	72.82	64.3	38.7	6.56	3.94	0.07~0.17	1.21	SBS2.5-4515R SBS2.5-1545L
17.5	37	20	20.51	20.6	12.9	2.10	1.31		0.19	
20	35	23	88.18	108	65.8	11.1	6.71	0.08~0.18	1.99	SBS3-4515R SBS3-1545L
21.33	44	23	28.54	34.7	21.9	3.54	2.24		0.34	
24	45	30	118.08	253	156	25.8	15.9	0.12~0.27	4.04	SBS4-4515R SBS4-1545L
23.33	52	30	32.26	81.1	52.0	8.27	5.30		0.76	
20	44	35	152.88	473	295	48.3	30.0	0.14~0.34	6.08	SBS5-4515R SBS5-1545L
30	65	35	48.64	152	98.2	15.5	10.0		1.44	
12	21	12	65.39	17.9	12.9	1.83	1.31	0.05~0.15	0.70	SBS1.5-6015R SBS1.5-1560L
10.43	22.5	12	15.55	4.22	3.21	0.43	0.33		0.042	
16	27	16	87.02	42.5	30.9	4.33	3.15	0.06~0.16	1.59	SBS2-6015R SBS2-1560L
14.25	30	16	18.06	10.0	7.73	1.02	0.79		0.10	
20	34	20	108.64	96.1	58.4	9.79	5.95	0.07~0.17	3.13	SBS2.5-6015R SBS2.5-1560L
18.06	37.5	20	20.58	22.6	14.6	2.31	1.49		0.20	
25	41	22	134.4	156	95.7	15.9	9.76	0.08~0.18	5.38	SBS3-6015R SBS3-1560L
21.12	43	22	31.58	36.8	23.9	3.75	2.44		0.35	

[Caution on Secondary Operations]

- Please read "Caution on Performing Secondary Operations" (Page 284) 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.
- Due to the gear teeth being induction hardened, no secondary operations can be performed on tooth areas including the bottom land (approx. 2 to 3 mm).

GCU-M Miter Gear Kit



Installment : Intersecting axes gears
 Gear Type : Miter Gears
 Gears : SM2-25
 PM2-25
 Gear Ratio : 1
 Weight : Approx. 1kg

Use of bevel gears allows the changing of the shaft angle by 90 degrees. Applications include the changing of the direction of power.

* 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.