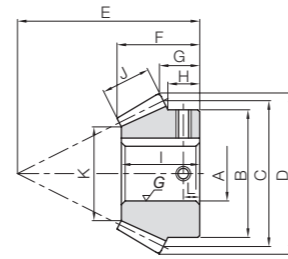


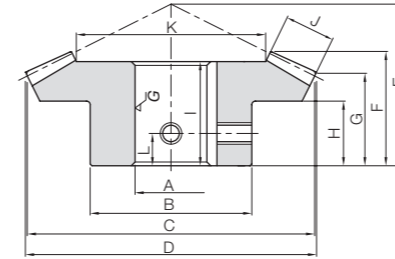


Specifications	
Precision grade	JIS B 1704: 1978 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35°
Material	SCM415
Heat treatment	Carburized *
Tooth hardness	55 to 60HRC

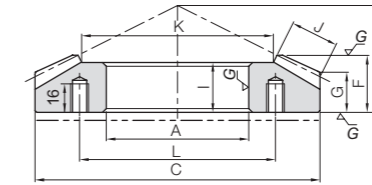
* No secondary operations can be performed on these finished gears due to the applied carburizing process.



BK



B4



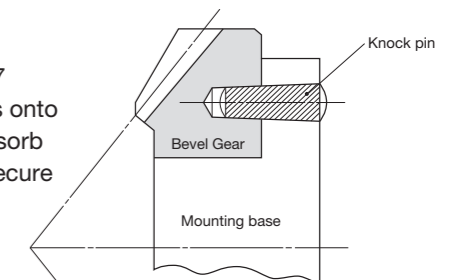
B7

Catalog Number	Gear Ratio	Module	No. of teeth	Direction of spiral	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back	Hub width	Hole length
						A _{H7}	B	C	D	E	F	G	H	I
MBSA2-3020R MBSB2-3020R MBSA2-2030L MBSB2-2030L	1.5	m2	30	R	B4	20 22	40	60	61.36	40	26.8	21.02	14	23
MBSA2.5-3020R MBSB2.5-3020R MBSA2.5-2030L MBSB2.5-2030L		m2	20	L	BK	15 18	35	40	43.49	45	24.96	16.16	13.33	23
MBSA3-3020R MBSB3-3020R MBSA3-2030L MBSB3-2030L		m2.5	30	R	B4	22 25	48	75	76.74	50	33.6	26.31	18	30
MBSA4-3020R MBSB4-3020R MBSA4-2030L MBSB4-2030L		m2.5	20	L	BK	18 20	43	50	54.43	55	30.08	18.98	15.17	28
MBSA5-3020R MBSA5-2030L MBSB5-2030L		m3	30	R	B4	25 30	60	90	92.21	60	40.34	31.66	21	36
MBSA6-3020R MBSA6-2030L MBSB6-2030L		m3	20	L	BK	22 25	53	60	65.58	65	35.17	21.86	17.67	32.5
MBSA2-4020R MBSB2-4020R MBSA2-2040L MBSB2-2040L		m4	30	R	B4	35 40	75	120	122.91	70	43.99	32.18	21	39
MBSA3-4020R MBSB3-4020R MBSA3-2040L MBSB3-2040L		m4	20	L	BK	30 35	70	80	87.34	85	45.53	27.45	21.67	42
MBSA4-4020R MBSA4-2040L MBSB4-2040L		m5	30	R	B7	80	—	150	—	70	35.53	23.8	—	31
MBSA5-4020R MBSA5-2040L MBSB5-2040L		m5	20	L	BK	35 40	87	100	109.2	105	55.05	33.07	25.67	51
MBSA6-4020R MBSA6-2040L MBSB6-2040L		m6	30	R	B7	90	—	180	—	80	38.86	24.37	—	33
MBSA2-4020R MBSB2-4020R MBSA2-2040L MBSB2-2040L		m6	20	L	BK	45 50	105	120	130.48	125	65.57	38.49	30	60
MBSA2-4020R MBSB2-4020R MBSA2-2040L MBSB2-2040L	2	m2	40	R	B4	20 22	45	80	81.06	45	31.83	26.06	18	29
MBSA2.5-4020R MBSB2.5-4020R MBSA2.5-2040L MBSB2.5-2040L		m2	20	L	BK	15 18	35	40	44.2	55	28.16	16.05	13.75	27
MBSA3-4020R MBSB3-4020R MBSA3-2040L MBSB3-2040L		m2.5	40	R	B4	25 28	55	100	101.29	50	33.35	26.29	16	30
MBSA4-4020R MBSA4-2040L MBSB4-2040L		m2.5	20	L	BK	20 22	43	50	55.12	65	31.01	16.28	13.25	29
MBSA5-4020R MBSA5-2040L MBSB5-2040L		m3	40	R	B4	30 35	65	120	121.57	60	39.81	31.57	21	35
MBSA6-4020R MBSA6-2040L MBSB6-2040L		m3	20	L	BK	22 25	53	60	66.03	80	38.9	21.51	18.25	36.5
MBSA2-4020R MBSB2-4020R MBSA2-2040L MBSB2-2040L		m4	40	R	B7	80	—	160	—	60	32.08	22.53	—	28
MBSA3-4020R MBSB3-4020R MBSA3-2040L MBSB3-2040L		m4	20	L	BK	30 35	70	80	88.46	100	45.38	22.12	17.5	43
MBSA4-4020R MBSA4-2040L MBSB4-2040L		m5	40	R	B7	90	—	200	—	70	35.2	22.98	—	30
MBSA5-4020R MBSA5-2040L MBSB5-2040L		m5	20	L	BK	40 45	87	100	109.91	125	57.11	27.48	21.75	53.5
MBSA6-4020R MBSA6-2040L MBSB6-2040L		m6	40	R	B7	110	—	240	—	80	37.89	23.62	—	32
MBSA2-4020R MBSB2-4020R MBSA2-2040L MBSB2-2040L		m6	20	L	BK	50 55	105	120	132.04	150	67.8	33.01	26.25	64

[Caution on Product Characteristics] ① The keyway tolerance is the value before hardening.

Face width	Holding surface dia.	Keyway	Socket head screw	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number
				Bending strength	Surface durability	Bending strength	Surface durability			
J	K	Width × Depth	Size	L						
11	37.56	6 x 2.8 6 x 2.8	2-M5 2-M5	7	34.4	38.4	3.51	3.91	0.06~0.16	0.26 0.24
11	24.34	5 x 2.3 6 x 2.8	2-M4 2-M5	6.5	23.5	25.6	2.39	2.61		0.14 0.13
14	48.01	6 x 2.8 8 x 3.3	2-M5 2-M6	9	68.0	76.8	6.93	7.84	0.07~0.17	0.52 0.49
14	31.02	6 x 2.8 6 x 2.8	2-M5 2-M5	7.5	46.4	51.2	4.73	5.22		0.26 0.25
17	57.14	8 x 3.3 8 x 3.3	2-M6 2-M6	11	118	135	12.1	13.8	0.08~0.18	0.96 0.90
17	36.2	6 x 2.8 8 x 3.3	2-M5 2-M6	9	80.7	90.1	8.23	9.19		0.46 0.43
23	76.72	10 x 3.3 12 x 3.3	2-M8 2-M8	10	283	328	28.9	33.5	0.12~0.27	1.77 1.68
23	48.07	8 x 3.3 10 x 3.3	2-M6 2-M8	11	193	219	19.7	22.3		1.03 0.95
28	97.36	—	6-M10	110	544	637	55.4	64.9	0.14~0.34	2.80
28	62.04	10 x 3.3 12 x 3.3	2-M8 2-M8	13	371	425	37.8	43.3		2.01 1.89
34	115.61	—	6-M10	120	927	1120	94.6	114	0.16~0.36	4.55
34	72.41	14 x 3.8 14 x 3.8	2-M10 2-M10	15	633	745	64.5	76.0		3.56 3.38
14	52.7	6 x 2.8 6 x 2.8	2-M5 2-M5	9	59.6	69.6	6.08	7.09	0.06~0.16	0.53 0.51
14	25.39	5 x 2.3 6 x 2.8	2-M4 2-M5	7	29.9	34.8	3.05	3.55		0.16 0.14
17	66.99	8 x 3.3 8 x 3.3	2-M6 2-M6	8	114	135	11.7	13.8	0.07~0.17	0.93 0.90
17	29.97	6 x 2.8 6 x 2.8	2-M5 2-M5	7	57.3	67.6	5.84	6.89		0.26 0.25
20	80.28	8 x 3.3 10 x 3.3	2-M6 2-M8	11	195	233	19.9	23.7	0.08~0.18	1.47 1.40
20	36.56	6 x 2.8 8 x 3.3	2-M5 2-M6	9.5	97.7	116	9.97	11.9		0.51 0.48
27	107.63	—	6-M10	110	466	564	47.5	57.5	0.12~0.27	3.11
27	51.25	8 x 3.3 10 x 3.3	2-M6 2-M8	9	234	282	23.8	28.8		1.05 0.96
34	133.97	—	6-M10	120	915	1120	93.3	114	0.14~0.34	5.59
34	61.95	12 x 3.3 14 x 3.8	2-M8 2-M10	11	458	559	46.7	57.0		1.96 1.82
40	162.56	—	6-M10	140	1530	1920	156	196	0.16~0.36	8.48
40	77.11	14 x 3.8 16 x 4.3	2-M10 2-M10	14	766	961	78.1	97.9		3.33 3.11

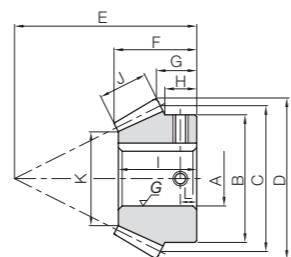
When installing products produced in B7 style (ring type), always secure the gears onto the mounting base with taper pins to absorb the rotational loads. It is dangerous to secure with bolts only.



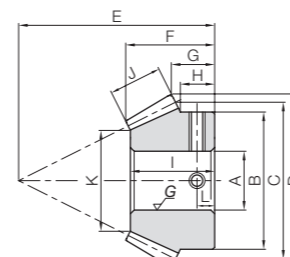


Specifications	
Precision grade	JIS B 1704: 1978 grade 4
Gear teeth	Gleason
Pressure angle	20°
Helix angle	35°
Material	SCM415
Heat treatment	Carburized *
Tooth hardness	55 to 60HRC

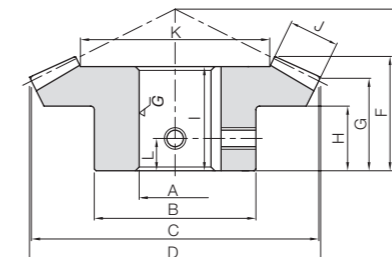
* No secondary operations can be performed on these finished gears due to the applied carburizing process.



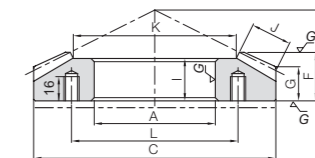
BK



BT



B4



B7

Catalog Number	Gear Ratio	Module	No. of teeth	Direction of spiral	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back	Hub width	Hole length
						A _{H7}	B	C	D	E	F	G	H	I
MBSA2-4515R MBSB2-4515R	3	m2	45	R	B4	20	48	90	90.66	40	30.01	25.99	18	27
22														
MBSA2-1545L MBSB2-1545L		m2	15	L	BT	10	26	30	34.59	55	23.78	10.77	9.33	22.5
12														
MBSA2.5-4515R MBSB2.5-4515R		m2.5	45	R	B4	22	55	112.5	113.28	45	32.43	27.42	18	28
25														
MBSA2.5-1545L MBSB2.5-1545L		m2.5	15	L	BK	12	32	37.5	43.06	70	30.51	14.68	12.84	29
15														
MBSA3-4515R MBSB3-4515R		m3	45	R	B4	30	65	135	136.03	55	39.94	34.05	22	35
32														
MBSA3-1545L MBSB3-1545L		m3	15	L	BK	18	38	45	52	85	38.12	18.67	16.33	36.5
20														
MBSA4-4515R		m4	45	R	B7	80	—	180	—	50	28.85	22.14	—	25
22														
MBSA4-1545L MBSB4-1545L		m4	15	L	BK	22	52	60	69.24	110	47.51	21.54	18.67	45.5
25														
MBSA5-4515R		m5	45	R	B7	90	—	225	—	60	33.57	25.16	—	28
28														
MBSA5-1545L MBSB5-1545L	m5	15	L	BK	32	65	75	86.55	135	56.89	24.43	20.83	54	
32														
MBSA6-4515R	m6	45	R	B7	110	—	270	—	70	38.28	28.05	—	32	
35														
MBSA6-1545L MBSB6-1545L	m6	15	L	BK	40	78	90	103.13	160	66.39	27.19	23	63	
40														

[Caution on Product Characteristics] ① The keyway tolerance is the value before hardening.

Face width	Holding surface dia.	Keyway	Socket head screw	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number	
				Bending strength	Surface durability	Bending strength	Surface durability				
J	K	Width × Depth	Size	L							
14	61.82	6 x 2.8 6 x 2.8	2-M5 2-M5	9	67.8	61.3	6.91	6.25	0.06~0.16	0.61 0.60	MBSA2-4515R MBSB2-4515R
14	16.46	— 4 x 1.8	2-M4 2-M4	5	21.7	20.4	2.22	2.08		0.081 0.073	MBSA2-1545L MBSB2-1545L
17	77.83	6 x 2.8 8 x 3.3	2-M5 2-M6	9	130	119	13.3	12.1	0.07~0.17	1.01 0.98	MBSA2.5-4515R MBSB2.5-4515R
17	21.48	4 x 1.8 5 x 2.3	2-M4 2-M4	7	41.6	39.6	4.24	4.04		0.16 0.15	MBSA2.5-1545L MBSB2.5-1545L
21	92.39	8 x 3.3 10 x 3.3	2-M6 2-M8	11	229	211	23.3	21.6	0.08~0.18	1.78 1.75	MBSA3-4515R MBSB3-4515R
21	26.18	6 x 2.8 6 x 2.8	2-M5 2-M5	9	73.3	70.5	7.48	7.18		0.26 0.24	MBSA3-1545L MBSB3-1545L
28	124.3	—	6-M10	110	542	508	55.3	51.8	0.12~0.27	3.93	MBSA4-4515R
28	35.91	6 x 2.8 8 x 3.3	2-M5 2-M6	10	174	169	17.7	17.3		0.63 0.58	MBSA4-1545L MBSB4-1545L
35	154.88	—	6-M10	120	1060	1000	108	102	0.14~0.34	7.38	MBSA5-4515R
35	42.64	8 x 3.3 10 x 3.3	2-M6 2-M8	11	339	334	34.6	34.1		1.16 1.07	MBSA5-1545L MBSB5-1545L
42	186.12	—	6-M10	140	1790	1740	183	178	0.16~0.36	12.0	MBSA6-4515R
42	52.37	10 x 3.3 12 x 3.3	2-M8 2-M8	12	575	581	58.6	59.3		1.90 1.75	MBSA6-1545L MBSB6-1545L

When installing products produced in B7 style (ring type), always secure the gears onto the mounting base with taper pins to absorb the rotational loads. It is dangerous to secure with bolts only.

