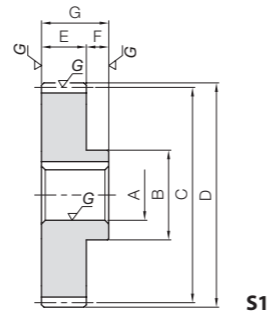




Specifications	
Precision grade	JIS grade N5 (JIS B1702-1: 1998)
Gear teeth	Standard full depth
Pressure angle	20°
Material	SCM415
Heat treatment	Carburized*
Tooth hardness	55 to 60HRC

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



S1

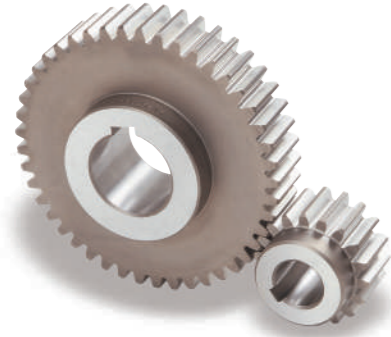
Catalog Number	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	
				A _{H7}	B	C	D	E	F	G	
MSG1-18	m1	18	S1	8	15	18	20	10	5	15	
MSG1-20		20		8	17	20	22				
MSG1-20**		20		10	17	20	22				
MSG1-24		24		12	20	24	26				
MSG1-25		25		25	10	20	25				27
MSG1-25					12	20	25				27
MSG1-30		30		30	10	25	30				32
MSG1-30					12	25	30				32
MSG1-40		40		15	30	40	42				
MSG1-48		48		48	12	30	48				50
MSG1-48					15	30	48	50			
MSG1-50		50		12	35	50	52				
MSG1-60		60		20	40	60	62				
MSG1-70		70		20	45	70	72				
MSG1-80		80		20	45	80	82				
MSG1-100	100	20	45	100	102						
MSG1.5-15**	m1.5	15	S1	10	18	22.5	25.5	15	10	25	
MSG1.5-18		18		10	22	27	30				
MSG1.5-18		18		12	22	27	30				
MSG1.5-20		20		20	12	25	30				33
MSG1.5-20					15	25	30				33
MSG1.5-24		24		15	28	36	39				
MSG1.5-25		25		16	30	37.5	40.5				
MSG1.5-30		30		30	18	30	45				48
MSG1.5-30					18	30	45				48
MSG1.5-36		36		18	32	54	57				
MSG1.5-40		40		16	35	60	63				
MSG1.5-50		50		50	18	40	75	78			
MSG1.5-50					22	40	75	78			
MSG1.5-60		60		25	45	90	93				
MSG1.5-70		70		20	45	105	108				
MSG1.5-80	80	80	20	45	120	123					
MSG1.5-80			25	45	120	123					
MSG1.5-100	100	25	50	150	153						
MSG2-15**	m2	15	S1	15	24	30	34	20	10	30	
MSG2-18		18		12	30	36	40				
MSG2-18		18		15	30	36	40				
MSG2-20		20		20	15	32	40				44
MSG2-20					18	32	40				44
MSG2-24		24		18	35	48	52				
MSG2-25		25		25	16	35	50				54
MSG2-25					20	35	50				54
MSG2-30		30		22	40	60	64				
MSG2-35		35		18	40	70	74				
MSG2-40		40		40	20	45	80	84			
MSG2-40					25	45	80	84			
MSG2-60		60		25	55	120	124				

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

② Products marked with "**" have a thin wall section between the keyway and the tooth, so please consider the strength of the thick part when using them. For details, please refer to the web catalog.

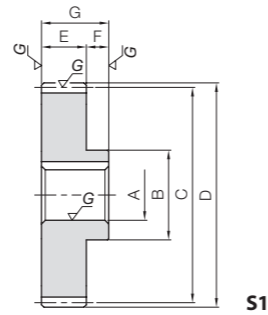
Keyway Width x Depth	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number
	Bending strength	Surface durability	Bending strength	Surface durability			
3 x 1.4	12.1	6.37	1.24	0.65	0.08~0.16	0.020	MSG1-18
3 x 1.4	14.2	8.04	1.45	0.82		0.027	MSG1-20
4 x 1.8						0.023	MSG1-20**
4 x 1.8	18.5	12.0	1.88	1.22		0.034	MSG1-24
4 x 1.8	19.6	13.1	2.00	1.33		0.041	MSG1-25
4 x 1.8						0.037	MSG1-25
4 x 1.8	25.1	19.0	2.56	1.94		0.065	MSG1-30
4 x 1.8						0.061	MSG1-30
5 x 2.3	36.5	34.6	3.72	3.53		0.10	MSG1-40
4 x 1.8	45.8	50.6	4.67	5.16		0.16	MSG1-48
5 x 2.3						0.15	MSG1-48
4 x 1.8	48.1	55.1	4.91	5.62		0.18	MSG1-50
6 x 2.8	59.9	80.6	6.11	8.22		0.27	MSG1-60
6 x 2.8	71.9	111	7.33	11.4		0.37	MSG1-70
6 x 2.8	83.9	147	8.55	15.0		0.47	MSG1-80
6 x 2.8	103	224	10.5	22.8	0.69	MSG1-100	
4 x 1.8	30.8	14.8	3.15	1.51	0.050	MSG1.5-15**	
4 x 1.8	41.0	22.1	4.18	2.26	0.080	MSG1.5-18	
4 x 1.8					0.074	MSG1.5-18	
4 x 1.8	48.0	27.9	4.89	2.84	0.098	MSG1.5-20	
5 x 2.3					0.085	MSG1.5-20	
5 x 2.3	62.4	41.5	6.36	4.24	0.13	MSG1.5-24	
5 x 2.3	66.0	45.4	6.73	4.63	0.14	MSG1.5-25	
6 x 2.8	84.7	66.4	8.63	6.77	0.19	MSG1.5-30	
6 x 2.8	108	97.1	11.0	9.90	0.28	MSG1.5-36	
5 x 2.3	123	121	12.6	12.3	0.37	MSG1.5-40	
6 x 2.8	162	193	16.6	19.7	0.57	MSG1.5-50	
6 x 2.8					0.54	MSG1.5-50	
8 x 3.3	202	283	20.6	28.8	0.77	MSG1.5-60	
6 x 2.8	231	372	23.6	38.0	1.08	MSG1.5-70	
6 x 2.8	270	494	27.5	50.3	1.39	MSG1.5-80	
8 x 3.3					1.36	MSG1.5-80	
8 x 3.3	347	787	35.4	80.2	2.13	MSG1.5-100	
5 x 2.3	73.1	35.7	7.46	3.64	0.10	MSG2-15**	
4 x 1.8	97.2	53.5	9.91	5.46	0.19	MSG2-18	
5 x 2.3					0.17	MSG2-18	
5 x 2.3	114	67.6	11.6	6.89	0.22	MSG2-20	
6 x 2.8					0.20	MSG2-20	
6 x 2.8	148	101	15.1	10.3	0.30	MSG2-24	
5 x 2.3	157	110	16.0	11.2	0.33	MSG2-25	
6 x 2.8					0.31	MSG2-25	
6 x 2.8	201	161	20.5	16.5	0.45	MSG2-30	
6 x 2.8	246	223	25.1	22.7	0.64	MSG2-35	
6 x 2.8	292	294	29.7	30.0	0.84	MSG2-40	
8 x 3.3					0.79	MSG2-40	
8 x 3.3	457	658	46.6	67.1	1.84	MSG2-60	



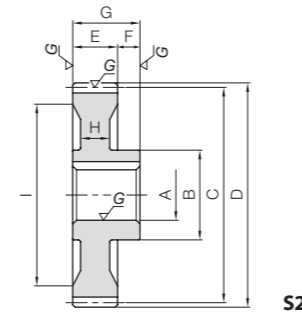


Specifications	
Precision grade	JIS grade N5 (JIS B1702-1: 1998)
Gear teeth	Standard full depth
Pressure angle	20°
Material	SCM415
Heat treatment	Carburized*
Tooth hardness	55 to 60HRC

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



S1



S2

Catalog Number	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.					
				A _{H7}	B	C	D	E	F	G	H	I					
MSGA2.5-15 MSGB2.5-15**	m2.5	15	S1	15	30	37.5	42.5	25	12	37	—	—					
MSGB2.5-20		20		22	40	50	55										
MSGB2.5-24		24		22	40	60	65										
MSGB2.5-25		25		25	45	62.5	67.5										
MSGB2.5-36		36		30	55	90	95										
MSGA2.5-40 MSGB2.5-40		40		25 32	55	100	105										
MSGA2.5-55		55		30	70	137.5	142.5										
MSGB2.5-60		60		40	70	150	155										
MSGA2.5-70		70		S2	40	85	175						180	17	150		
MSGA3-15 MSGB3-15**		m3		15	S1	18	36						45	51	30	15	45
MSGB3-20	20		25	45		60	66										
MSGB3-25	25		30	55		75	81										
MSGA3-30 MSGB3-30	30		28 35	60		90	96										
MSGA3-40 MSGB3-40	40		30 40	70		120	126										
MSGA3-45	45		30	70		135	141										
MSGA3-60	60		S2	35		80	180	186	20	156							
MSGB4-15**	15		30	48		60	68	40	20	60	—	—					
MSGA4-20 MSGB4-20	20		28 32	60		80	88										
MSGA4-24	24		28	60		96	104										
MSGA4-25 MSGB4-25	25	30 35	60	100	108												
MSGA4-30 MSGB4-30	30	35 40	70	120	128												
MSGA4-40 MSGB4-40	40	40 45	80	160	168												
MSGB4-45	45	45	80	180	188												
MSGB4-50	50	S2	50	85	200	208	26						168				

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

② Products marked with "**" have a thin wall section between the keyway and the tooth, so please consider the strength of the thick part when using them. For details, please refer to the web catalog.

Keyway Width x Depth	Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash (mm)	Weight (kg)	Catalog Number	
	Bending strength	Surface durability	Bending strength	Surface durability				
5 x 2.3	143	71.0	14.6	7.24	0.10~0.20	0.23	MSGA2.5-15	
6 x 2.8							MSGB2.5-15**	
6 x 2.8	222	134	22.7	13.7			0.39	MSGB2.5-20
6 x 2.8	289	201	29.4	20.5			0.56	MSGB2.5-24
8 x 3.3	306	220	31.2	22.4			0.60	MSGB2.5-25
8 x 3.3	498	471	50.8	48.0			1.26	MSGB2.5-36
8 x 3.3	543	560	55.3	57.1			1.61	MSGA2.5-40
10 x 3.3							1.52	MSGB2.5-40
8 x 3.3	804	1090	82.0	112			3.06	MSGA2.5-55
12 x 3.3	892	1310	90.9	134			3.45	MSGB2.5-60
12 x 3.3	1020	1730	104	176	4.24	MSGA2.5-70		
6 x 2.8	247	124	25.2	12.7	0.10~0.20	0.40	MSGA3-15	
6 x 2.8							0.35	MSGB3-15**
8 x 3.3	384	236	39.1	24.1			0.67	MSGB3-20
10 x 3.3	528	386	53.9	39.3			1.06	MSGB3-25
8 x 3.3	677	565	69.1	57.7			1.60	MSGA3-30
10 x 3.3							1.48	MSGB3-30
8 x 3.3	938	988	95.6	101			2.86	MSGA3-40
12 x 3.3							2.66	MSGB3-40
8 x 3.3	1090	1260	111	129			3.57	MSGA3-45
10 x 3.3	1470	2200	150	224			5.31	MSGA3-60
8 x 3.3	585	302	59.7	30.8	0.83	MSGB4-15**		
8 x 3.3	910	574	92.8	58.6	1.72	MSGA4-20		
10 x 3.3					1.63	MSGB4-20		
8 x 3.3	1130	819	115	83.5	2.41	MSGA4-24		
8 x 3.3	1190	896	122	91.4	2.56	MSGA4-25		
10 x 3.3					2.44	MSGB4-25		
10 x 3.3	1530	1320	156	134	3.69	MSGA4-30		
12 x 3.3					3.54	MSGB4-30		
12 x 3.3	2120	2290	216	234	6.49	MSGA4-40		
14 x 3.8					6.33	MSGB4-40		
14 x 3.8	2460	2930	251	299	8.01	MSGB4-45		
14 x 3.8	2800	3650	285	372	8.37	MSGB4-50		

