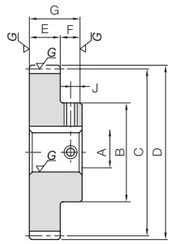
MSCPG Circular pitch 5, 10
CP Ground Spur Gears

Made to Order

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

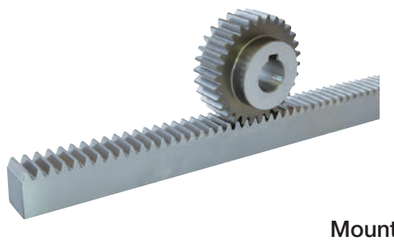


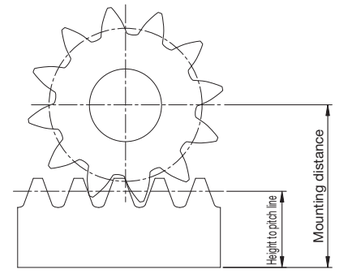
S1K

Catalog Number	Pitch mm (Module)	No. of teeth	Profile shift coefficient	Mounting distance	Shape	Bore A_{H7}	Hub dia. B	Pitch dia. C	Outside dia. D	Face width E	Hub width F	Total length G
MSCPG5-20A (Made to Order) **MSCPG5-20B** (Made to Order)	**CP5** (1.5915)	20	+0.425	35	S1K	12 15	28	31.83	36.37	15	15	30
MSCPG5-25A (Made to Order) **MSCPG5-25B** (Made to Order)		25	+0.438	39		12 15	35	39.79	44.37			
MSCPG5-30A (Made to Order) **MSCPG5-30B** (Made to Order)		30	+0.451	43		15 20	40	47.75	52.37			
MSCPG5-40A (Made to Order) **MSCPG5-40B** (Made to Order) **MSCPG5-40C** (Made to Order)		40	+0.478	51		15 20 25	45	63.66	68.37			
MSCPG10-20A (Made to Order) **MSCPG10-20B** (Made to Order)	**CP10** (3.1831)	20	+0.111	64	S1K	20 25	50	63.66	70.73	30	20	50
MSCPG10-25A (Made to Order) **MSCPG10-25B** (Made to Order)		25	+0.124	72		25 30	60	79.58	86.73			
MSCPG10-30A (Made to Order) **MSCPG10-30B** (Made to Order)		30	+0.137	80		30 40	70	95.49	102.73			
MSCPG10-40A (Made to Order) **MSCPG10-40B** (Made to Order)		40	+0.164	96		30 40	70	127.32	134.73			

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

[Precautions for Made to Order Products] ① Prices and lead times for Made to Order products require separate estimates. Contact your dealer.

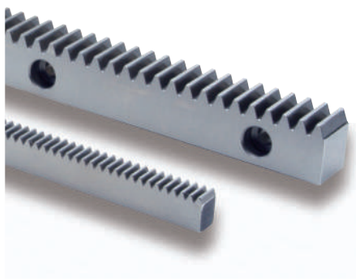




Mounting distance of a profile shifted gear and the meshing rack

Keyway Width × Depth	Socket head screw Size	Socket head screw J	Distance traveled in one turn (mm)	Allowable torque (N·m) Bending strength	Allowable torque (N·m) Surface durability	Allowable torque (kgf·m) Bending strength	Allowable torque (kgf·m) Surface durability	Backlash (mm)	Weight (kg)	Catalog Number
4x 1.8 5x 2.3	M4	7.5	100	70.0	46.7	7.13	4.76	0.04~0.14	0.14 0.13	**MSCPG5-20A** (Made to Order) **MSCPG5-20B** (Made to Order)
4x 1.8 5x 2.3	M4		125	91.8	78.2	9.37	7.97		0.24 0.22	**MSCPG5-25A** (Made to Order) **MSCPG5-25B** (Made to Order)
5x 2.3 6x 2.8	M4 M5		150	114	119	11.6	12.2		0.32 0.29	**MSCPG5-30A** (Made to Order) **MSCPG5-30B** (Made to Order)
5x 2.3 6x 2.8 8x 3.3	M4 M5 M6		200	159	229	16.2	23.4		0.53 0.50 0.45	**MSCPG5-40A** (Made to Order) **MSCPG5-40B** (Made to Order) **MSCPG5-40C** (Made to Order)
6x 2.8 8x 3.3	M5 M6	10	200	514	375	52.4	38.2	0.05~0.16	0.94 0.87	**MSCPG10-20A** (Made to Order) **MSCPG10-20B** (Made to Order)
8x 3.3	M6		250	689	628	70.3	64.1		1.43 1.34	**MSCPG10-25A** (Made to Order) **MSCPG10-25B** (Made to Order)
8x 3.3 12x 3.3	M6 M8		300	868	960	88.5	97.9		2.03 1.80	**MSCPG10-30A** (Made to Order) **MSCPG10-30B** (Made to Order)
8x 3.3 12x 3.3	M6 M8		400	1230	1850	126	188		3.36 3.13	**MSCPG10-40A** (Made to Order) **MSCPG10-40B** (Made to Order)

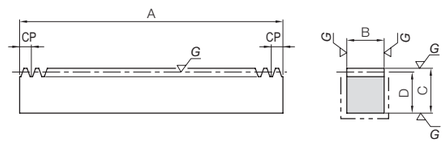
MRGCPF/MRGCPFD Circular pitch 5, 10
CP Hardened Ground Racks



Specifications	
Precision grade	KHK R 001 Grade 1 *
Gear teeth	Standard full depth
Pressure angle	20°
Material	SCM415
Heat treatment	Carburized **
Tooth hardness	55 to 60HRC

* The precision grade of J Series products is equivalent to the value shown in the table.

** In the illustration, the area surrounded with – – – line is masked during the carburization process (max. HRC40 or so) and can be modified.



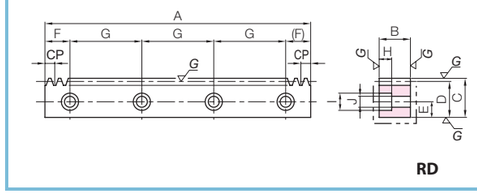
RF

Catalog Number	Pitch mm (Module)	No. of teeth	Shape	Total Length A	Face width B	Height C	Height to pitch line D	Allowable force (N) Bending strength	Allowable force (N) Surface durability	Allowable force (kgf) Bending strength	Allowable force (kgf) Surface durability	Backlash (mm)	Weight (kg)
MRGCPF5-500	**CP5** (1.5915)	100	RF	500	15	20	18.41	5380	5000	548	509	0.04~0.14	1.08
MRGCPF10-500	**CP10** (3.1831)	50			30	35	31.82	21500	20100	2190	2050	0.05~0.16	3.75

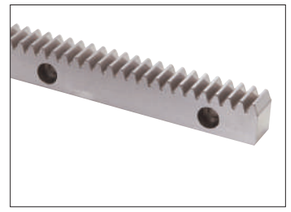
Catalog Number ● : J Series (Available-on-request)	Pitch mm (Module)	No. of teeth	Shape	Total Length A	Face width B	Height C	Height to pitch line D	Mounting hole dimensions E	F	G	No. of holes	Screw size
●**MRGCPFD5-500J**	**CP5** (1.5915)	100	RD	500	15	20	18.41	8	25	150	4	M5
●**MRGCPFD10-500J**	**CP10** (3.1831)	50			30	35	31.82	14				M10

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.

J Series



RD



Surface durability is 4 times higher than SRGCP Hardened Ground Racks, 2 times higher than KRGCP-H Hardened Ground Racks.

Counterbore dimensions H	I	J	Allowable force (N) Bending strength	Allowable force (N) Surface durability	Allowable force (kgf) Bending strength	Allowable force (kgf) Surface durability	Backlash (mm)	Weight (kg)	Catalog Number ● : J Series (Available-on-request)
6	10	6	5380	5000	548	509	0.04~0.14	1.06	●**MRGCPFD5-500J**
10.8	17.5	11	21500	20100	2190	2050	0.05~0.16	3.61	●**MRGCPFD10-500J**

Product Precautions → Page 274
Precautions for Standard Machined Products → Pages 42~44

You can download CAD data (DXF format) of KHK Products from the Website.