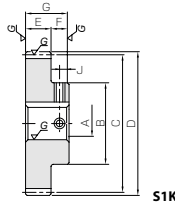


MSCPG CP Hardened Ground Spur Gears



| Specifications | |
|-----------------|---|
| Precision grade | JIS grade N5 (JIS B1702-1: 1998) JIS grade 1 (JIS B1702: 1976) |
| Gear teeth | Standard full depth |
| Pressure angle | 20° |
| Material | SCM415 |
| Heat treatment | Overall carburizing |
| Tooth hardness | 55 ~ 60HRC |

Circular Pitch 5, 10



S1K

* Designed with positive partial transposition and to have an integral value (mm) for the mounting distance, so both strength and usability are enhanced.

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

- [Caution on Product Characteristics] ① Although the dimensions of the keyway are made to the JIS (JIS9) tolerance, there may be some deviations due to the effects of heat treatment.
② The allowable forces shown in the table are the calculated values according to the assumed usage conditions. Please see page 31 for more details.
③ The backlash values shown in the table are the theoretical values when these gears and the MRGCPF Racks are in mesh.

MRGCPF · MRGCPFD CP Hardened Ground Racks

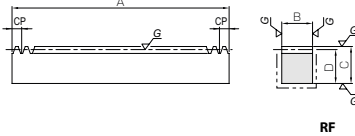
New! Best Ever Carburized Racks!



| Specifications | |
|-----------------|---------------------|
| Precision grade | KHK R 001 grade 1 |
| Gear teeth | Standard full depth |
| Pressure angle | 20° |
| Material | SCM415 |
| Heat treatment | |
| Tooth hardness | 55 ~ 60HRC |

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

Circular Pitch 5, 10



RF

* "The strongest in carburized racks! With the highest positioning accuracy in ground racks! Top quality from KHK's best technology."

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

| Catalog No. | Pitch mm (Module) | No. of teeth | Shape | Total length | | | | Face width | | | Height | Height to pitch line | Mounting hole dimensions | | | No. of mounting holes | Mounting screw size |
|--|-------------------------------|--------------|-------|--------------|----|----|-------|------------|------|-----|--------|----------------------|--------------------------|----|-----|-----------------------|---------------------|
| | | | | A | B | C | D | E | F | G | | | | | | | |
| ● J Series (Available-on-request) ● MRGCPFD5-500J ● MRGCPFD10-500J | CP5 (1.5915) CP10 (3.1831) | 100 50 | RD | 500 | 15 | 20 | 18.41 | 5380 | 5000 | 548 | 509 | 1.08 | 8 | 25 | 150 | 4 | M5 M10 |

- [Caution on Product Characteristics] ① The allowable forces shown in the table are the calculated values according to the assumed usage conditions. Please see Page 227 for more details.
② The backlash of racks differ depending on the size of the mating pinion. Please calculate the backlash from the backlash value of the mating pinion. Also, please refer to the data in the section called 'Backlash of Rack Tooth (Amount of Tooth Thinning)' on Page 191.

- [Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 228) when performing modifications 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.
② In the illustration, the area surrounded with --- line is masked during the carburization process and can be modified. However, the end faces on both sides do not have an anti-carburization coating on the taped holes, otherwise they could not be machined.

MSCPG

CP Ground Spur Gears

New

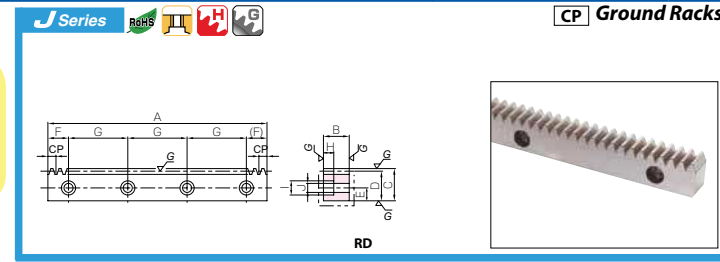
| Keyway WidthxDepth | Set Screw | | Distance traveled in one turn (mm) | Allowable torque (N·m) | | Allowable torque (kgf·m) | | Backlash (mm) | Weight (kg) | Catalog No. |
|----------------------------|----------------|---|---------------------------------------|------------------------|--------------------|--------------------------|--------------------|------------------|----------------------------|--------------------------|
| | Size | J | | Bending strength | Surface durability | Bending strength | Surface durability | | | |
| 4x 1.8 5x 2.3 | M4 | | 100 | 70.0 | 46.7 | 7.13 | 4.76 | 0.04-0.13 | 0.14 0.13 | MSCPG5-20A MSCPG5-20B |
| | | | | | | | | | | |
| 4x 1.8 5x 2.3 | M4 | | 150 | 114 | 119 | 11.6 | 12.2 | 0.24 0.22 | MSCPG5-25A MSCPG5-25B | |
| | | | | | | | | | | 5x 2.3 6x 2.8 |
| 5x 2.3 6x 2.8 8x 3.3 | M4 M5 M6 | | 200 | 514 | 375 | 52.4 | 38.2 | 0.94 0.87 | MSCPG10-20A MSCPG10-20B | |
| | | | | | | | | | | 6x 2.8 8x 3.3 |
| 8x 3.3 12x 3.3 | M6 M8 | | 300 | 868 | 960 | 88.5 | 97.9 | 2.03 1.80 | MSCPG10-30A MSCPG10-30B | |
| | | | | | | | | | | 8x 3.3 12x 3.3 |

- [Caution on Secondary Operations] ① No secondary operations can be performed on these precision finished gears due to applied carburizing process.
For products which are different in specifications, such as bore size, we accept custom-made gear orders and provide a price quote.

MRGCPF · MRGCPFD

CP Ground Racks

Surface durability;
4 times higher than the SRG
Hardened Ground Racks, 2
times higher than the KRG-H
Hardened Ground Racks.



| Counterbore dimensions | | | Allowable force (N) | | Allowable force (kgf) | | Weight (kg) | Catalog No. |
|------------------------|------|----|---------------------|--------------------|-----------------------|--------------------|----------------|-------------------------------------|
| H | I | J | Bending strength | Surface durability | Bending strength | Surface durability | | |
| 6 | 10 | 6 | 5380 | 5000 | 548 | 509 | 1.06 | ● MRGCPFD5-500J ● MRGCPFD10-500J |
| 10.8 | 17.5 | 11 | 21500 | 20100 | 2190 | 2050 | 3.61 | |

- [Caution on J series] ① As available-on-request products, requires a lead-time for shipping within 2 working-days (excludes the day ordered), after placing an order. Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.