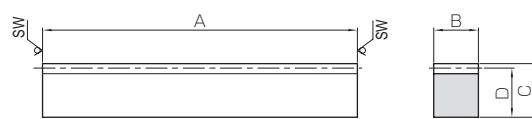


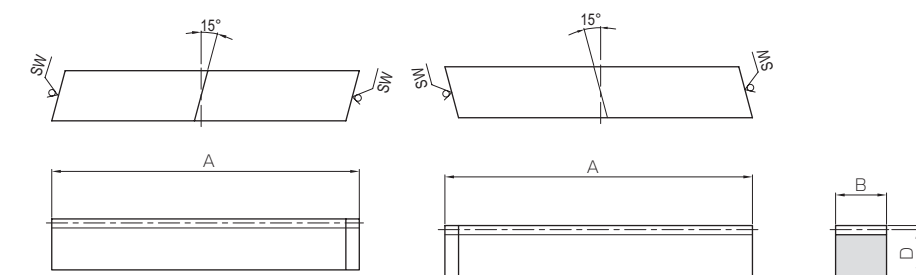


| Specifications            |                     |
|---------------------------|---------------------|
| Precision grade           | KHK R 001 grade 5   |
| Reference section of gear | Normal plane        |
| Gear teeth                | Standard full depth |
| Normal pressure angle     | 20°                 |
| Helix angle               | 15°                 |
| Material                  | S45C                |
| Heat treatment            | —                   |
| Tooth hardness            | (less than 95HRB)   |
| Surface treatment         | Black oxide coating |



SW: Sawing surface

R1



SW: Sawing surface

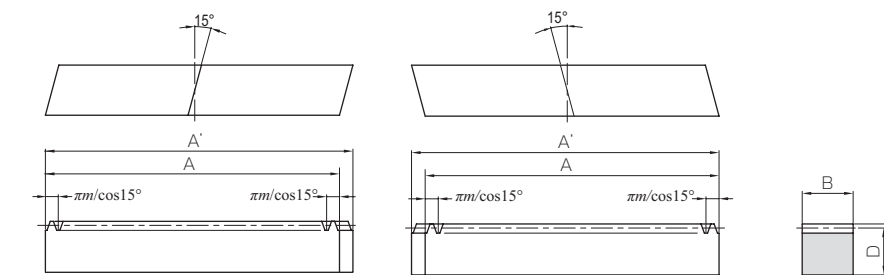
RR

SW: Sawing surface

RL

| Catalog No.                | Module | Effective no. of teeth | Direction of helix | Shape    | Total length |    | Face width | Height | Height to pitch line | Allowable force (N) |      | Allowable force (kgf) |                    |
|----------------------------|--------|------------------------|--------------------|----------|--------------|----|------------|--------|----------------------|---------------------|------|-----------------------|--------------------|
|                            |        |                        |                    |          | A            | B  |            |        |                      | C                   | D    | Bending strength      | Surface durability |
| KSRH2-100R<br>KSRH2-100L   | m2     | 12                     | R<br>L             | RR<br>RL | 95           | 25 | 25         | 23     | 4710                 | 1570                | 481  | 160                   |                    |
| KSRH2-500R<br>KSRH2-500L   |        | 75                     | R<br>L             | R1       | 505          |    |            |        |                      |                     |      |                       |                    |
| KSRH2-1000R<br>KSRH2-1000L |        | 152                    | R<br>L             |          | 1010         |    |            |        |                      |                     |      |                       |                    |
| KSRH3-100R<br>KSRH3-100L   | m3     | 7                      | R<br>L             | RR<br>RL | 95           | 35 | 35         | 32     | 9910                 | 3520                | 1010 | 359                   |                    |
| KSRH3-500R<br>KSRH3-500L   |        | 49                     | R<br>L             | R1       | 505          |    |            |        |                      |                     |      |                       |                    |
| KSRH3-1000R<br>KSRH3-1000L |        | 101                    | R<br>L             |          | 1010         |    |            |        |                      |                     |      |                       |                    |

| Weight (kg) | Catalog No.                |
|-------------|----------------------------|
|             |                            |
| 2.28        | KSRH2-500R<br>KSRH2-500L   |
| 4.56        | KSRH2-1000R<br>KSRH2-1000L |
| 0.84        | KSRH3-100R<br>KSRH3-100L   |
| 4.44        | KSRH3-500R<br>KSRH3-500L   |
| 8.88        | KSRH3-1000R<br>KSRH3-1000L |



RFR

RFL

| Catalog No.                  | Module | No. of teeth | Direction of helix | Shape      | Total length |         | Face width | Height | Height to pitch line | Allowable force (N) |      |
|------------------------------|--------|--------------|--------------------|------------|--------------|---------|------------|--------|----------------------|---------------------|------|
|                              |        |              |                    |            | A            | A'      |            |        |                      | B                   | C    |
| KSRHF2-1000R<br>KSRHF2-1000L | m2     | 153          | R<br>L             | RFR<br>RFL | 995.24       | 1001.94 | 25         | 25     | 23                   | 4710                | 1570 |
| KSRHF3-1000R<br>KSRHF3-1000L | m3     | 102          | R<br>L             | RFR<br>RFL | 995.24       | 1004.62 | 35         | 35     | 32                   | 9910                | 3520 |

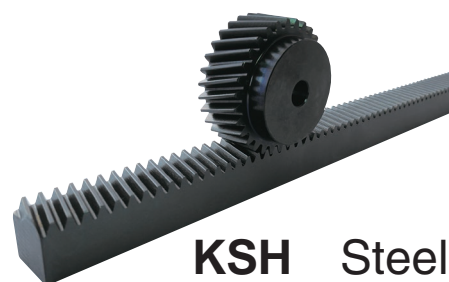
| Allowable force (kgf) |                    | Weight (kg) | Catalog No.                  |
|-----------------------|--------------------|-------------|------------------------------|
| Bending strength      | Surface durability |             |                              |
| 481                   | 160                | 4.49        | KSRHF2-1000R<br>KSRHF2-1000L |
| 1010                  | 359                | 8.75        | KSRHF3-1000R<br>KSRHF3-1000L |

| Catalog No.                    | Module | No. of teeth | Direction of helix | Shape      | Total length |         | Face width | Height | Height to pitch line | Mounting hole dimensions |       |     | No. of mounting holes | Mounting screw size |
|--------------------------------|--------|--------------|--------------------|------------|--------------|---------|------------|--------|----------------------|--------------------------|-------|-----|-----------------------|---------------------|
|                                |        |              |                    |            | A            | A'      |            |        |                      | B                        | C     | D   |                       |                     |
| KSRHFD2-1000R<br>KSRHFD2-1000L | m2     | 153          | R<br>L             | RDR<br>RDL | 995.24       | 1001.94 | 25         | 25     | 23                   | 10                       | 47.62 | 180 | 6                     | M6                  |
| KSRHFD3-1000R<br>KSRHFD3-1000L | m3     | 102          | R<br>L             | RDR<br>RDL | 995.24       | 1004.62 | 35         | 35     | 32                   | 14                       | 47.62 | 180 | 6                     | M10                 |

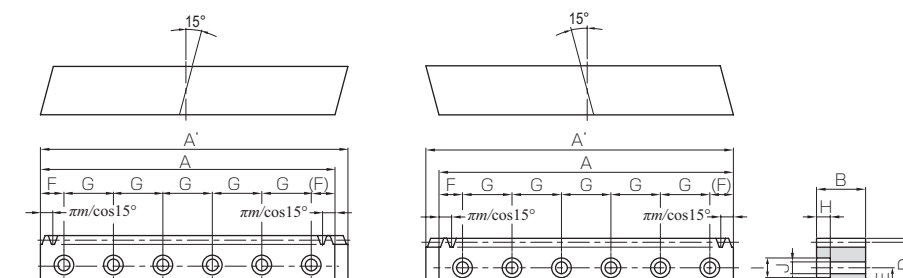
| Counterbore dimensions |      |    | Allowable force (N) |                    | Allowable force (kgf) |                    | Weight (kg) | Catalog No.                    |
|------------------------|------|----|---------------------|--------------------|-----------------------|--------------------|-------------|--------------------------------|
| H                      | I    | J  | Bending strength    | Surface durability | Bending strength      | Surface durability |             |                                |
| 7                      | 11   | 7  | 4710                | 1570               | 481                   | 160                | 4.43        | KSRHFD2-1000R<br>KSRHFD2-1000L |
| 10.8                   | 17.5 | 11 | 9910                | 3520               | 1010                  | 359                | 8.52        | KSRHFD3-1000R<br>KSRHFD3-1000L |

- [Caution on Product Characteristics]
- The allowable forces shown in the table are the calculated values according to the assumed usage conditions. Please see Page 190 for more details.
  - 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 193.
  - Please use KSH Helical Gears as the mating pinion.
  - These racks produce axial thrust forces. See page 167 for more details.
  - After attaching the racks to the base, please fasten with dowel pins. Clamping only with mounting screws could possibly cause the screws to be broken, due to a heavy load.
- [Caution on Secondary Operations]
- Please read "Caution on Performing Secondary Operations" (Page 194) when performing modifications and/or secondary operations for safety concerns.
  - If gear tooth hardening, or thermal refining, is applied, the decarburization layer (approx. 0.5 mm thickness) on the rectangular surfaces cannot have the hardness you designate.
  - Avoid hardening Racks with bolt holes, due to deformation occurring at the mounting hole and the difficulty of straightening after hardening.

## Recommended Mating Pinions



KSH Steel Helical Gears



RDR

RDL