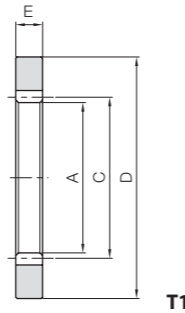




Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating



Catalog Number	Module	No. of teeth	Shape	Outside dia.				Pitch dia.		Face width		Allowable torque (N-m)		Allowable torque (kgf-m)		Backlash (mm)	Weight (kg)
				A	C	D	E	Bending strength	Surface durability	Bending strength	Surface durability						
<b>SIR2-120</b> <b>SIR2-200</b>	<b>m2</b>	120	T1	236	240	286	20	413	68.8	42.1	7.02	0.12~0.28	2.98				
		200		396	400	446	20	677	110	69.0	11.2	4.80					
<b>SIR2.5-120</b> <b>SIR2.5-200</b>	<b>m2.5</b>	120		295	300	355	25	807	138	82.3	14.0	0.14~0.31	5.55				
		200		495	500	555	25	1320	220	135	22.5	8.94					
<b>SIR3-120</b> <b>SIR3-160</b>	<b>m3</b>	120		354	360	424	30	1390	244	142	24.9	0.15~0.35	9.28				
		160		474	480	544	30	1840	315	188	32.1	12.1					

- [Caution on Product Characteristics] ① The backlash values shown in the table are the theoretical values for the normal direction for the internal ring in mesh with an SS spur gear.  
 ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see Page 207 for more details.  
 ③ Please check for the involute interference, trochoid interference and trimming interference prior to using internal gears.
- [Caution on Secondary Operations] ① Please read "Cautions on Performing Secondary Operations" (Page 207) when performing modifications and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK system for quick modification of KHK stock gears, is also available.  
 ② Avoid performing secondary operations that narrow the tooth width, as it affects precision and strength.

**Established equipment and technology  
Custom gears are also available.**

Diameter  $\phi$  700mm maximum, Module 6.5 maximum, Cutting Stroke 170 mm



Gear cutting by CNC Gear Shaper

# Racks

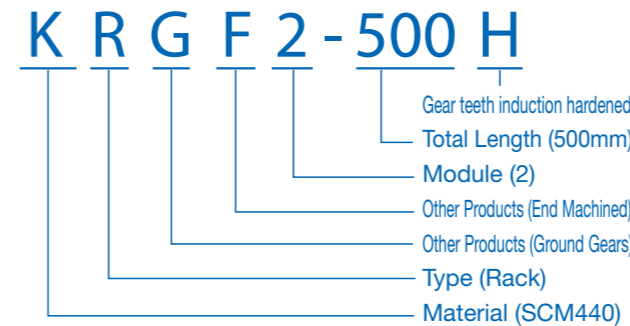
<b>MRGF/MRGFD</b> Hardened Ground Racks Material: SCM415 m1.5-3 Page 224	<b>KRGF-H/KRGFD-H</b> Hardened Ground Racks Material: SCM440 m1.5-3 Page 226	<b>KRG/KRGF/KRGFD</b> Thermal Refined Ground Racks Material: SCM440 m1-3 Page 228	<b>SRG/SRGF/SRFGD/SRFGK</b> Hardened Ground Racks Material: S45C m0.5-6 Page 230	<b>KRF-H/KRFD-H</b> Hardened Racks Material: SCM440 m1.5-5 Page 232	<b>SRF-H/SRFD-H</b> Hardened Racks Material: S45C m1.5-6 Page 234	<b>SRF-HL/SRFD-HL</b> Laser Hardened Racks Material: S45C m1.5-6 Page 236
<b>KRF/KRFD</b> Thermal Refined Racks Material: SCM440 m1.5-5 Page 238	<b>SRAF/SRAFD/SRAFK</b> Square Racks Material: S45C m1.5-4 Page 240	<b>SR</b> Racks Material: S45C m0.5-10 Page 242	<b>SRF</b> Steel Racks with Machined Ends Material: S45C m0.5-10 Page 243	<b>SRFD/SRFK</b> Steel Racks with Bolt Holes Material: S45C m0.5-6 Page 244	<b>SUR/SURF/SURFD</b> Stainless Steel Racks Material: SUS304 m1-4 Page 246	<b>DRF/DRFD/DRFK</b> Plastic Racks Material: Polyacetal m1-3 Page 248
<b>PR/PRF</b> Plastic Racks Material: MC901 m1-3 Page 250	<b>BSR</b> Racks Material: Free cutting brass (C3604) m0.5-1 Page 251	<b>SRO/SROS</b> Round Racks Material: S45C m1-5 Page 252	<b>SURO</b> Stainless Steel Round Racks Material: SUS303 m1-3 Page 253	<b>DR</b> Molded Flexible Racks Material: Duracon (R) (M25-44) m0.8-2 Page 254	<b>SSDR/ARL/SRS</b> Rack Clamps for Pinions/Rack Guide Rails For Molded Flexible Racks Material: S45C, etc. Page 254	<b>KRHG/KRHGF/KRHGFD</b> Ground Helical Racks Material: SCM440 m1-3 Page 256
<b>SRH/SRHF/SRHFD</b> Helical Racks Material: S45C m2, 3 Page 258	<b>SRHEF</b> Helical Racks Material: S45C m1.5-6 Page 260	<b>SHE</b> Helical Gears Material: S45C m1.5-6 Page 260	<b>ZST/ZSTD</b> Hardened Ground Helical Racks Material: DIN C45 (S45C equivalent) m2-6 Page 262	<b>ZSTP</b> Ground Helical Gears Material: SCM440 m2-6 Page 262	<b>ZST-GL</b> Assembly Gauges Material: S45C m1.5-6 Page 264	

**M** Includes Made to Order

## Catalog Number of KHK Stock Gears

The Catalog Number for KHK stock gears is based on the simple formula listed below. Please order KHK gears by specifying the Catalog Numbers.

(Example) Racks



Material	
M	SCM415
K	SCM440
S	S45C
SU	Stainless Steel
BS	Brass
P	MC901
D	Polyacetal

Type	
R	Racks
RH	Helical Racks
RO	Round Racks
S	Spur Gears
H	Helical Gears

Other Information	
F	Racks with Machined Ends
D	Racks with Bolt Holes
K	Racks with Drill Holes
G	Ground Gears
H	Gear teeth induction hardened
HL	Laser hardened
ZST	#####