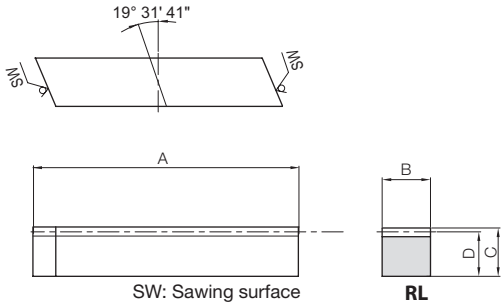
Assembly Gauges

Specifications	
Precision grade	KHK R 001 grade 2
Reference section of gear	Normal plane
Gear teeth	Standard full depth
Normal pressure angle	20°
Helix angle/ direction	19° 31' 41" left helix
Material	S45C
Heat treatment	—
Tooth hardness	(less than HB210)
Surface treatment	Black oxide coating

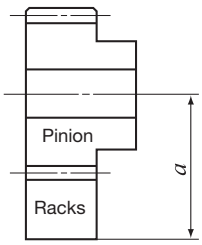


Catalog Number	Normal module (front pitch mm)	Effective No. of teeth	Shape	Total Length A	Face width B	Height C	Height to pitch line D	Weight (kg)
ZST1.5-GL	***m*1.5** (CP5)	9	RL	59	17	17	15.5	0.11
ZST2-GL	***m*2** (CP6.667)	7		66	25	25	23	0.26
ZST3-GL	***m*3**(CP10)	8		108	30	30	27	0.62
ZST4-GL	***m*4**(CP13.333)	6		118	40	40	36	1.17
ZST5-GL	***m*5**(CP16.667)	4		115	50	50	45	1.72
ZST6-GL	***m*6**(CP20)	3		119	60	60	54	2.49

[Caution on Product Characteristics] ① A gauge for assembling ZST/ZSTD/SRHEF helical racks.

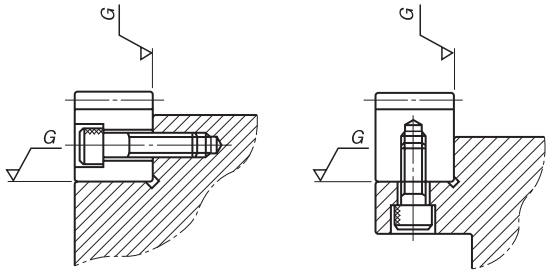
Points of Caution in Assembling

① ZST/ZSTD ground racks are designed to give the proper backlash when assembled using the mounting distance (tolerance of H7 to H8 required) given by the ZSTP Mating Pinion Dimension Table (Page 262). Make sure that the mounting distance stays constant for the length of the rack.

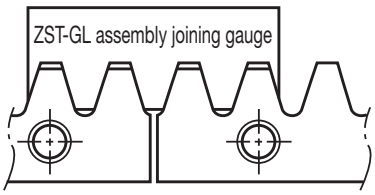


② Machined end type racks such as the ZST and ZSTD Series have pitch tolerance of -0.05 to -0.4mm at the end face. If you try to connect the racks without any space, the pitch at the connection will be too small and will cause problems. Please follow the following diagrams, "Connecting the Racks," for assembly.

③ The ZST/ZSTD type of KHK stock ground racks have four surfaces ground parallel with high precision. To maintain true angle, they should be mounted on high precision bases (within 10 μ m recommended) as shown below. It is even possible to correct for the angular errors of racks by compensating the mounting base. With recent increases in the requirement for zero backlash linear drives, such accurate assembly as shown is becoming more important. If the racks are not secured properly to the base, they could shift during operation and cause unexpected problems. It is very important to insure firm mounting by the use of dowel pins or similar devices. Please see Page 221 for more details.



Connecting the Racks



[NOTE] Please use the ZST-GL assembly gauge for the joining rack.