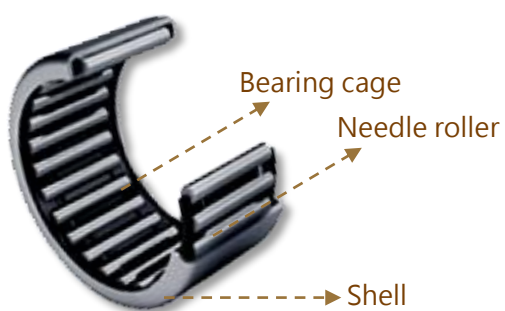


## ■ Introduction of Needle Bearing



Compared with ball bearings, needle bearings have smaller cross-sectional area and volume, and better load-bearing capacity, so needle bearings are more suitable for small size precision components. Due to its characteristics of light and small, it can effectively reduce the torque and inertial force suffered from the work, thereby to improve the mechanical efficiency. The needle bearing is forced by line contact, so it is more suitable for application in a vibrational operating environment

The function of a bearing cage is to ensure the parallelism of the needle rollers, so that it can reach a state of line contact with the inner and outer track surfaces during operation, and ensure that the needle rollers can bear the load without being damaged. Therefore, the accuracy and parallelism of the cage have a great influence on the quality of the needle bearing °



(Bearing cage)

## CASE STUDY

### Centerless grinding for needle bearing

Work piece and parameter	
material	SUJ2
HRC	HRC 60~66
Machine	Koyo
roughness	Ra0.1 ↓
Stock removal	0.09mm/twice
Grinding wheels detail	
Specification	25A120KL5V10W1A
Size	455X205X203.2

### Cylindrical grinding for needle bearing

Work piece and parameter	
material	SUJ2
HRC	HRC 60~66
Machine	Koyo
roughness	Ra0.2 ↓
Stock removal	0.2mm / 11.2S
Grinding wheels detail	
Specification	3CX120L7VLL10A
Size	455X18X203.2X300X45X10

### Bearing internal grinding

Work piece and parameter	
material	SUJ2
HRC	HRC 50
Machine	Toyo
roughness	Ra0.15 ↓
Stock removal	0.08mm/10 秒
Grinding wheels detail	
Specification	CBN325N200VIWDW
Size	10.5X7.5XM4X16.1X2

### Double-disc for bearing cage

Work piece and parameter	
Material HRC (not heat treated)	SCM415 HRB 90-100 STKM HRB 85-100
Material HRC (heat treated)	STKM HV 500-600 nitrogen HV 380-450
Machine	Koyo
Grinding wheels detail	
Specification	3CT80L7B-DISCT 32A80LM11B-DISCT
Size	585X75X8 、 585X75X240

### Centerless grinding for bearing cage

Specification	25A46LM5VHB1A	25A60LM5VHB1A	25A46N4B1A
Wheel size	610X205X304.8	610X305X304.8	610X405X304.8
Work size	Up to 30 mm	Up to 40 mm	Up to 60 mm

■ Other specification and size are customized, please contact us through the information below.

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