



# Needle Bearings

Needle roller bearings are composed of needle rollers and cages. Needle rollers are placed between two hardened and smooth surfaces. Cage prevents the rollers to contact each other and facilitates smooth rolling action. The diameter of rolling element in needle roller bearing is relatively small and having relatively large length/diameter ratio, this characteristic allows more load carrying capacity and ideal for oscillation motion.

AUTOMOTIVE

## Features

- ✓ Greater load-bearing capacity in a more compact design
- ✓ Most suited for oscillation motions
- ✓ Low inertial forces
- ✓ Greater rigidity

## Benefits

- ✓ Compact design for minimal space requirements
- ✓ Less elastic displacement as load per needle is less
- ✓ Needle bearings can be directly mounted on application shaft and housing
- ✓ Customized bearings as per application requirements

## Application

- ✓ In 2-wheelers needle bearings are mostly used in connecting rod big end, small end and swing arm
- ✓ In 4-wheelers needle bearings are used in passenger cars, LCV, HCV manual transmission as well as automatic transmission, starter motors, AC compressors, steering assembly

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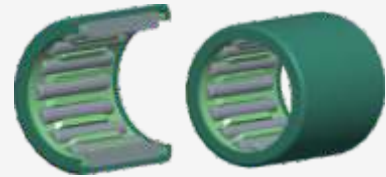
## Specifications



Needle roller and cage assembly



Needle roller and cage assembly for connecting rod bearings



Shell type needle roller bearing

## Technical Data

### Metal Cages

- ✓ Non-ferrous metallic coating on cages to avoid friction due to poor lubrication
- ✓ Special surface treatment for wear and corrosion resistance

### Needle Roller

- ✓ Specially designed features and precision
- ✓ Special heat treatment for contaminated environment condition

### Shell Cup

- ✓ Special steel and heat treatment
- ✓ Precision accuracy