

Planetary Shafts

Pins, Rollers & Shafts

Koyo®

Ball, Needle & Roller Bearings

Koyo is recognized as an innovating market leader

in Planet Shaft custom engineering and production. Our expertise in materials science and friction management solutions has contributed to long life planetary systems for over 50 years.

Our planet shafts are crafted from the highest quality steels within IATF 16949 / ISO 9001 and AS9100 certified manufacturing facilities.

State-Of-The-Art Manufacturing

Unique, in-house design and manufacturing capabilities (cold heading, machining, thermal treatment, and grinding) enable Koyo to provide cost effective solutions to satisfy a wide variety of application needs.

Our processing resources provide a broad range of sizes and configurations offering precision tolerances for diameter, roundness, straightness and more.

Features

Our expertise lies in the ability to match your unique requirements with our design for a truly custom product.

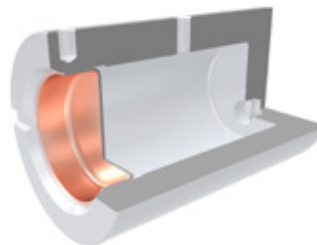
Koyo offers a variety of features to meet your most demanding applications:



Soft end dimples



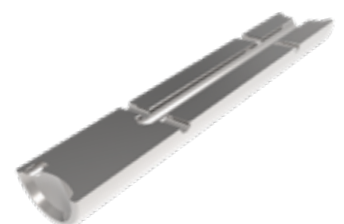
Broached or conical ends



Precision pinning holes and locating notches



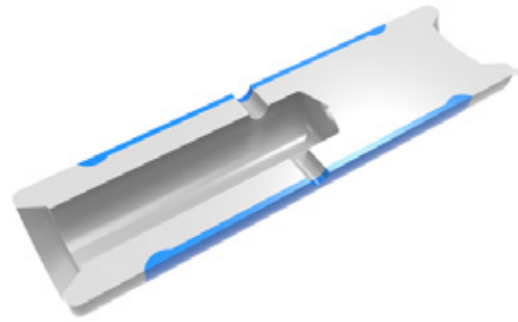
Formed partial or through-axial holes for cost-effective mass savings



Bearing lubrication passages via radial or angled holes

Features (continued)

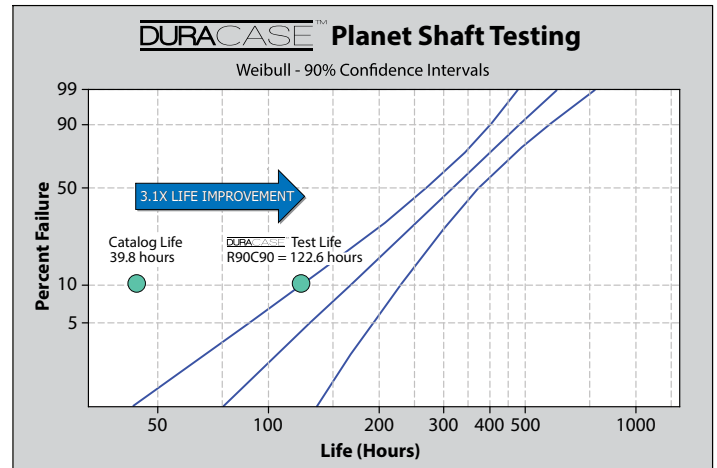
- Crowned raceway for bearing stress reduction
- Through-, case-, or induction-hardening of raceway
- **DURACASE™** long life advanced thermal treatment



DURACASE™

Duracase™ is a specialized heat treatment and processing. This results in a bearing surface that reduces the opportunity for asperity welding and flaking, commonly known as fine grain spalling and decreases localized subsurface stress that can result in coarse grain spalling.

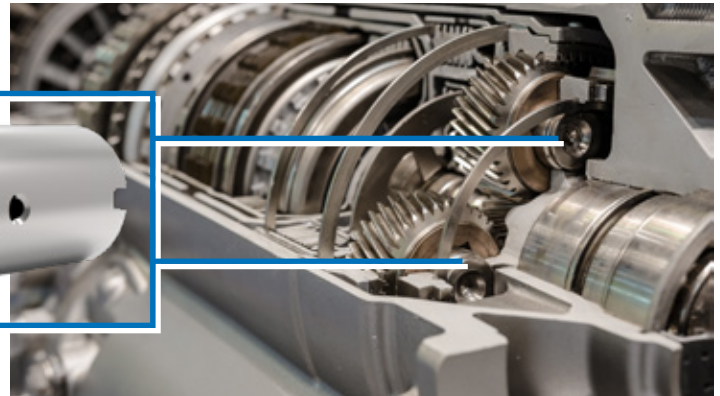
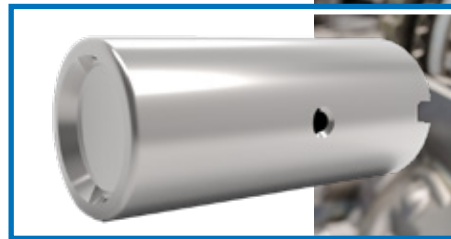
Koyo bench testing has shown that our Duracase™ enhanced heat treatment significantly extends life under typical planetary type bearing loading and lubrication conditions.



The graph above displays a 3.1 times life improvement compared to industry standard catalog life calculation.

Common Applications

- Automatic transmission
- Input/output gear sets
- Axles, differentials
- Drives
- Transfer cases



| Planet shaft scope [in mm] | |
|----------------------------|--|
| Diameter | φ8-120 |
| Length | 20-250 |
| Thru hardening material | ASTM A295 52100 / 100Cr6 / SUJ2 Bearing quality standard, excellent fatigue life, high tensile |
| Case hardening materials | SAE 1085 – Bearing quality, high strength, forming steel ASTM A534 8620/8640 – Bearing quality, good machinability and formability, carburizing steel |

Koyo®

To learn more, contact your sales representative or visit us online at:

www.JTEKT-NA.com

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