

厚肉シェル円筒ころ軸受

Thick-Wall Drawn Cup Cylindrical Roller Bearing

プレスレース付き高効率スラスト玉軸受

High Efficiency Thrust Ball Bearing with the Press Race



開発の狙い Aims of Development

プレス技術を活用した円筒ころ軸受の小型化・軽量化

Downsizing and weight reduction of cylindrical roller bearing using press technology

プレス技術を活用したスラスト軸受の摩擦損失低減

Reducing friction losses in thrust bearing using press technology

製品の概要と特長(構造・原理) Products Overview and Features (Structure and Principle)

厚肉シェル円筒ころ軸受

Thick-Wall Drawn Cup Cylindrical Roller Bearing

開発中
Under
development



従来品(旋削外輪)

Conventional Products (Turned outer ring)



新製品(プレス外輪)

New Products (Pressed outer ring)



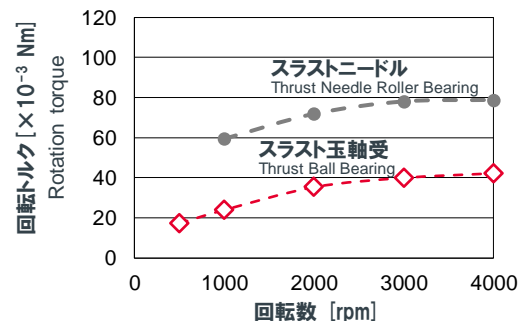
軸受重量 ▲25%
Bearing weight

軸受外径 ▲4%
Bearing outer diameter

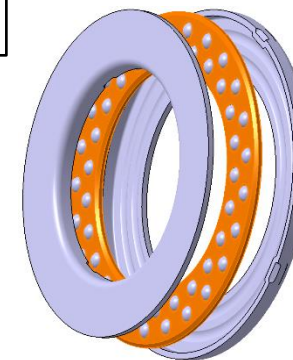
プレスレース付き高効率スラスト玉軸受

High Efficiency Thrust Ball Bearing with the Press Race

開発中
Under
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スラスト荷重: 0.2Ca
Thrust load
潤滑油: ATF
Lubricant



同定格容量のニードルころに対し40~50%の摩擦損失低減効果
It is 40-50% of friction loss reduction effects for needle roller bearing with the same capacity.

プラネタリ機構用 薄肉スラストニードル軸受

Thin Thrust Needle Roller Bearing for Planetary Gear Mechanism

次世代長寿命プラネタリシャフト

Next-Generation Long-Life Planetary Shaft



開発の狙い Aims of Development

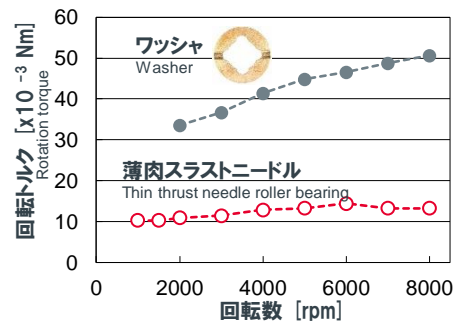
遊星式eAxleの摩擦損失低減と軸受の耐久性向上に貢献するアイテムの提案

Proposal of items contributing to reduction of friction loss and improvement of bearing durability in Planet-type eAxle

製品の概要と特長 (構造・原理) Products Overview and Features (Structure and Principle)

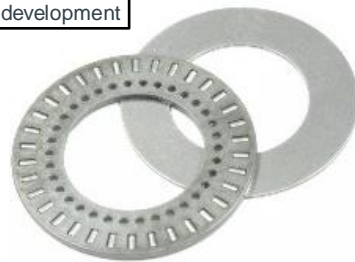
プラネタリ機構用 薄肉スラストニードル軸受

Thin Thrust Needle Roller Bearings for Planetary Gear Mechanism



スラスト荷重:300N
Thrust load
潤滑油:ATF
Lubricant

開発中
Under development



軸受幅:1.2mm
Bearing width

(ころφ1mm レース0.2mm)
Roller Race

ワッシャに対し70~80%の摩擦損失低減効果

Friction loss is reduced by 70 to 80% compared with washers.

次世代長寿命プラネタリシャフト

Next-Generation Long-Life Planetary Shaft

寿命倍率

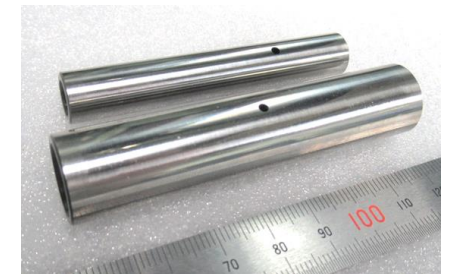
Life extension ratio

標準品 Standard	SUJ2 IH*	×1
長寿命品 Long life	SUJ2 special IH* SUJ2 UR**	×1.8
新製品 New product	次世代プラネタリシャフト Next-Generation Long-Life Planetary Shaft	×3.0
超長寿命品 Super long life	SHX3	×4.5

* IH :Induction Hardening **UR:Special Heat Treatment

標準品に対し3倍の耐久性

New product has the triple durability for Standard.



大径スラスト/シェルニードル軸受

Large Diameter Thrust / Drawn Cup Needle Roller Bearings



開発の狙い Aims of Development

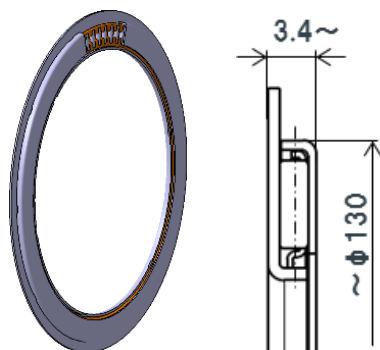
ニードル軸受の対応可能サイズ拡大によりユニットの小型化・省スペース化に貢献

Contributing to the downsizing and space saving of unit by expanding the size of needle bearings that can be accommodated

製品の概要と特長(構造・原理) Products Overview and Features (Structure and Principle)

大径スラストニードル軸受

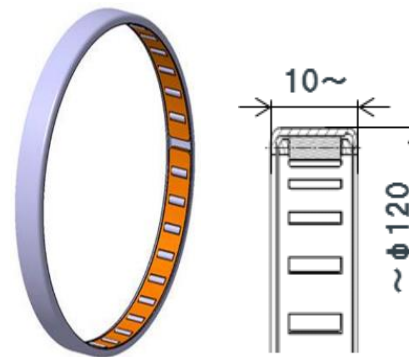
Large Diameter Thrust Needle Roller Bearings



	外径 Outer diameter
量産中 Conventional products	~ φ 85mm
新製品 New products	~ φ 130mm

大径シェルニードル軸受

Large Diameter Drawn Cup Needle Roller Bearings



	外径 Outer diameter	幅 Width
量産中 Conventional products	~ φ 90mm	12mm~
新製品 New products	~ φ 120mm	10mm~

量産化技術の向上で製造可能レンジを拡大

Improvements in mass production technology have expanded the range of possible production.

NSK