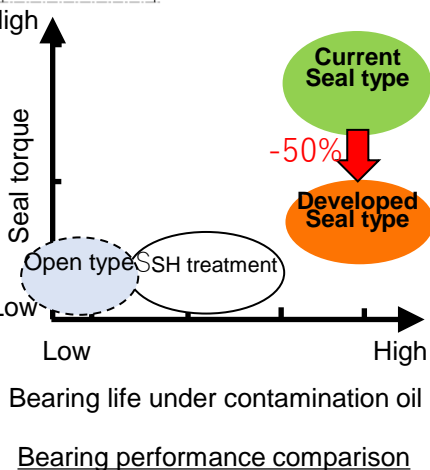
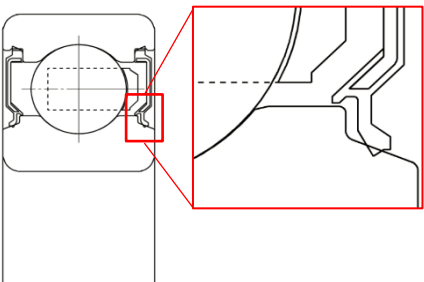


Improvement bearing life under contamination oil by ultra low torque seal. Contributes to improvement electricity consumption rate by downsizing and reduced bearing torque.

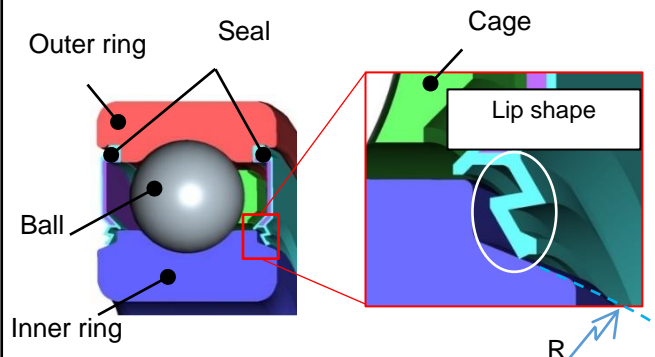
### Features

#### Current

- Current bearing (RKB seal shape)



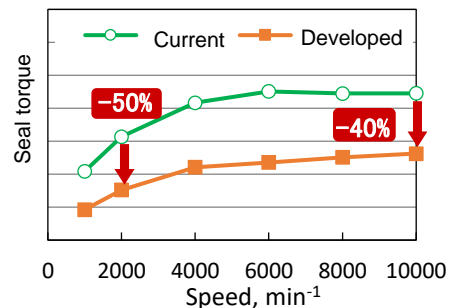
#### Developed



- Optimized lip shape
  - Long lip length (bent shape)
  - Apply minimum lip thickness
  - => Low tension
  - Improve conformability of seal lip
  - Suppression of fatigue
- Optimized lip interference
  - => Same fitting condition as current seal
- Slope seal groove for inner ring
  - => Increased interference robustness to misalignment (same as current seal)

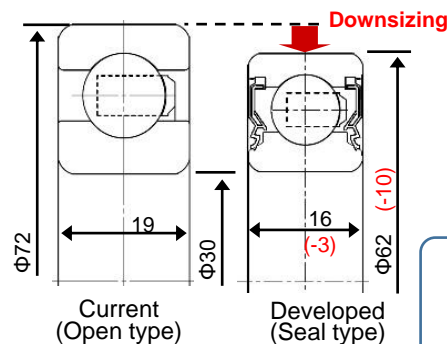
### Effect

#### 1) Low torque



40-50% torque reduction at low to high speeds

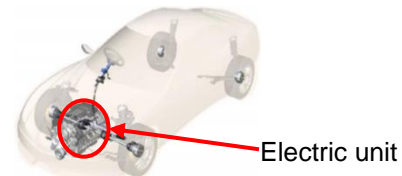
#### 3 Downsizing of bearings (One example)



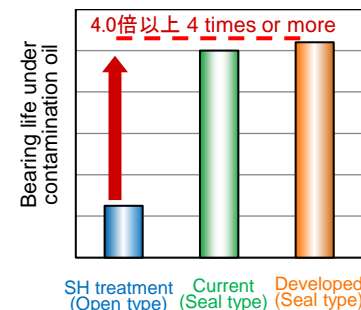
< Lightweight and compact >

OD : -14%  
Width : -16%  
Weight : -44%

Seal under contamination oil allows downsizing of bearings.



#### 2) Improved bearing life under contamination oil



4 times or more improved bearing life under contamination oil