



## **NEW ROBUSTDYNA™**

### HIGH CAPACITY, ULTRA-HIGH SPEED ANGULAR CONTACT BALL BEARINGS

#### **ENABLING HIGHLY VERSATILE MACHINING**

ROBUSTDYNA angular contact ball bearings are a crystallization of NSK's prowess with material and design optimization, enabling highly versatile machining by excelling at both heavy cutting as well as ultra-high speed finishing.

The optimized internal design of ROBUSTDYNA delivers significantly higher load ratings and longer fatigue life, as well as higher resistance to impact damage. And proprietary heat-resistant steel ensures stability and durability at ultra-high speeds.

#### **OPERATING ADVANTAGES**

- › **Higher load capacity** - by optimizing the bearing's internal design, machining capacity has been increased by 15% compared to NSKROBUST™ equivalents
- › **Longer spindle life** - increased dynamic load rating of 40% extends bearing fatigue life by as much as 3 times
- › **Higher impact resistance** - increased static load rating reduces the risk of bearing damage due to impact
- › **Ultra-high speed performance** - the use of NSK's proprietary SHX steel, with exceptional heat and wear resistance, has enabled NSK to achieve 3 million  $d_mN$ .

**DESIGN FEATURES**

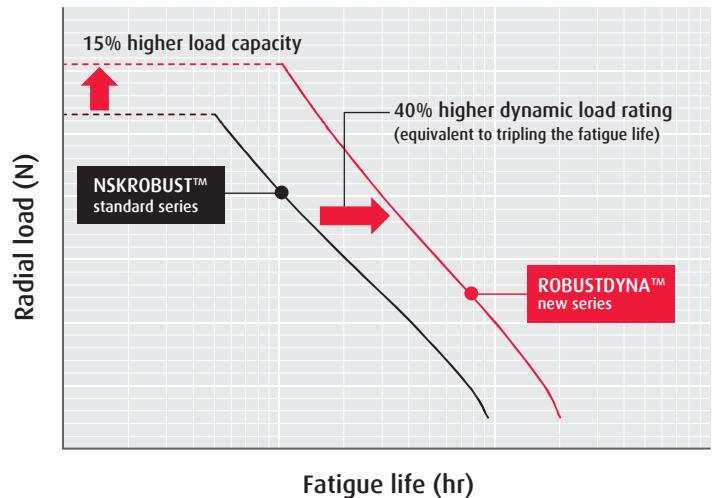
- › **Optimized internal design** - with larger balls for increased load ratings
- › **Silicon nitride (Si<sub>3</sub>N<sub>4</sub>) ceramic balls** - for outstanding speed and accuracy with low heat generation and high seizure resistance
- › **Outer ring guided phenolic resin cage** - for stable, ultra-high speed operation
- › **NSK exclusive SHX steel inner and outer rings** - with exceptional heat, wear, and seizure resistance
- › Available with 18° (BNRD type) and 25° (BERD type) contact angles



Optimized internal design using larger balls boosts load capacity  
 Right: new **ROBUSTDYNA**  
 Left: standard **NSKROBUST**

**INCREASED ROLLING FATIGUE LIFE AND MACHINING LOAD CAPACITY**

- › 15% higher load capacity
- › 40% higher dynamic load rating
- › 3x longer bearing fatigue life



**DESIGNATION SYSTEM**

Nominal Bore Diameter		Dimension Series		Cage		Preload	
70	BNRD	10	X	T	DBB	CA50	P4
Bearing Type		Material - Rings, Balls		Arrangement		Accuracy	

For additional information about NSK precision machine components and integrated system solutions, visit:

[www.nskamericas.com](http://www.nskamericas.com)