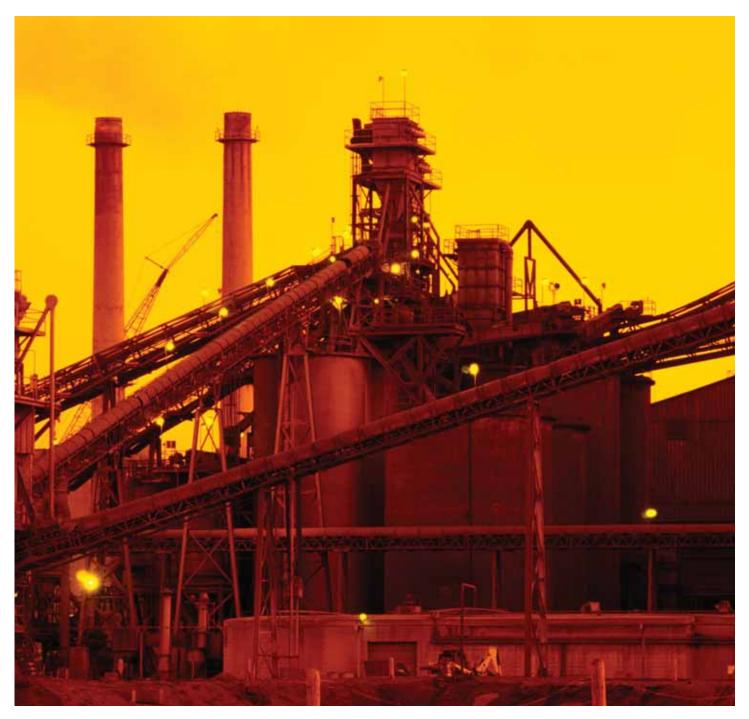


Bearings for the Cement and Ready-Mix Concrete Industries

Market leading NSK technology that increases bearing life and reduces maintenance costs and downtime.





Upgrading to NSK takes your operation to a higher level of efficiency and performance.

From our Tough Steel[™] bearings for demanding environments, to our HPS, High Performance Series, spherical roller bearings, which offer high load carrying capacities and longer bearing life, choosing NSK provides an upgrade for your entire operation.

For quality products and service choose NSK.

UPGRADE TO NSK.

CONSTRUCTIVE SOLUTIONS

In a screw pump conveying system at a cement plant, a large angular contact bearing was experiencing dust contamination. The dust was wearing the raceways and increasing clearance. In order to avoid a catastrophic failure, the bearings needed to be changed prematurely.

NSK recommended Tough Steel[™] by pointing out that Tough Steel[™] would manage the problem by offering resistance to the contamination. In addition, the new bearings with Tough Steel[™] would run quieter and smoother and offer shock load protection. Since installing the new Tough Steel[™] bearings, bearing consumption reduced by more than 50% over a five year period. The plant has since converted other locations to Tough Steel[™].

TOUGH Environment, TOUGH Problems, TOUGH STEEL.

HPS SPHERICAL ROLLER BEARINGS

Raw Grinding, Electrostatic Precipitator, Kiln, Finish Grinding, Conveyors

HPS offers a higher standard in performance by offering higher load carrying capacities, longer bearing life and higher limiting speeds. Advanced material, optimum design and state of the art manufacturing make HPS one of the longest lasting spherical bearings available.

SPHERICAL ROLLING BEARINGS WITH BRASS CAGE

Raw Grinding, Electrostatic Precipitator, Kiln, Finish Grinding, Conveyors

> Brass Cage Sphericals have high load capabilities and are specially designed for shock loading and vibratory applications. Featuring a one piece machined brass cage and optional Tough Steel[™].

High load tapered roller bearings are available in two and four row versions to support high radial and axial loads. They feature an optimized cage design and a range of special materials for arduous conditions.

Raw Grinding, Finish Grinding

TAPERED ROLLER BEARING Utilizing a patented high strength cage of pressed steel, the EW series offers low noise and heat generation characteristics. As a standard cylindrical bearing, the EW series is an easy interchange across the globe.

concrete

Raw Grinding, Kiln, Finish Grinding

CYLINDRICAL ROLLER BEARINGS

TOUGH STEEL[™] BEARINGS

Preheater, Conditioning Tower, Electrostatic Precipitator

For extremely demanding environments and ideal for vibratory applications, bearings with Tough Steel[™] reduce flaking and wear caused by contamination. These bearings also have increased resistance to seizure resulting in longer bearing life.

SAF SPLIT HOUSINGS

Head Pulley, Tail Pulley

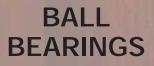
Ideal for handling heavy radial loads, SAF split housings are made of cast iron or other materials with multiple grease fittings. They are easy to mount and come with optional accessories including seals, end covers and fixing rings.

Solutions

1117 B

Provide outstanding performance in a wide range of applications. Incorporating the highest quality steel, precision balls, superfinished raceways and a variety of patented sealing arrangements.

Preheater, Conditioning Tower, ID Fan, Electrostatic Precipitator, Conveyors



Lubricated with oil-impregnated material, oil seeps from the material providing ample and continuous lubrication making them relatively maintenance -free. Molded oil bearings come in a variety of bearing types.

Preheater, Conditioning Tower, ID Fan, Electrostatic Precipitator, Conveyors

> MOLDED-OIL BEARINGS



Worldwide Sales Offices

| NSK LtdHeadquarters, Tokyo, Japar | | Philippines: | | Turkey: | |
|---|--|---|---------------------------|-------------------------------------|----------------------|
| Americas & Europe Department Asia Marketing & Sales Department | tel: 03-3779-7120 tel: 03-3779-7121 | NSK representative office | | NSK Bearings Middle East Trading Co | |
| Africa | 101.00-0773-7121 | Manila | tel: 02-759-6246 | Istanbul | tel: 90-216-442-7106 |
| South Africa: | | Singapore: | -1 | United Kingdom: | |
| NSK South Africa (Pty) Ltd. | | NSK International (Singapore) Pte Lte | | NSK Bearings Europe Ltd. | |
| Johannesburg | tel: (011) 458 3600 | Singapore NSK Singapore (Pte) Ltd. | tel: (65) 273 0357 | Peterlee, England | tel: 0191-586-6111 |
| Asia and Oceania | | | tel: (65) 278 1711 | NSK UK Ltd. | |
| Australia: www.nskaustralia.com.au | | Singapore Taiwan: | tel: (65) 278 1711 | Newark, England | tel: 0163-660-5123 |
| NSK Australia Pty. Ltd. | | Taiwan: Taiwan NSK Precision Co., Ltd. | | NSK Steering Systems Europe Ltd. | |
| Melbourne | tel: (03) 9764-8302 | | 1-1-00-0501-0050 | Coventry, England | tel: 024-76-588588 |
| China: | | Taipei Thailand: | tel: 02-2591-0656 | North and South America | |
| NSK Hong Kong Ltd. Hong Kong | tel: 2739-9933 | | | NSK Americas, Inc. (American Hea | dauarters) |
| Kunshan NSK Co., Ltd. | lei. 2733-3353 | NSK Bearings (Thailand) Co., Ltd. | 1-1-00-0440450-50 | Ann Arbor, Michigan, U.S.A. | tel: 734-913-7500 |
| Kunshan | tel: 0520-7305654 | Bangkok | tel: 02-6412150~58 | Arin Arbor, Michigan, 0.3.A. | tei. 734-913-7300 |
| Guizhou HS NSK Bearings Co., Ltd | | NSK Safety Technology (Thailand) Co | | | |
| Anshun | tel: 0853-3521505 | Chonburi | tel: (038) 214-317-8 | NSK Argentina SRL | |
| NSK (Shanghai) Trading Co., Ltd. | | Siam NASTECH Co., Ltd. | . () | Buenos Aires | tel: 011-4762-6556 |
| Shanghai | tel: 021-62099051 | Chachoengsao | tel: (038) 522-343~350 | Brazil: | www.br.nsk.com |
| NSK representative office | tel: 010-6590-8161 | Europe | | NSK Brasil Ltda. | |
| Beijing NSK representative office | lei: 010-6590-8161 | NSK Europe Ltd. | | São Paulo | tel: 011-3269-4700 |
| Shanghai | tel: 21-6209-9051 | (European Headquarters) | www.eu.nsk.com | Canada: | www.ca.nsk.com |
| NSK representative office | 101.21 0200 0001 | Maidenhead, England | tel: 0162-850-9800 | NSK Canada Inc. | |
| Guangzhou | tel: 020-8732-0583 | France: | | Toronto | tel: 905-890-0740 |
| NSK representative office | | NSK France S.A. | | Mexico: | |
| Anshun | tel: 0853-3522522 | Paris | tel: 01 30 57 39 39 | NSK Rodamientos Mexicana, S.A. de | CV |
| India: | | Germany: | | Mexico City | tel: 5-301-2741 |
| Rane NASTECH Ltd. Chennai tel: 04114-65313. 65314 | 65365 66003 | NSK Deutschland Gmbh | | United States of America: | www.us.nsk.com |
| NSK representative office | , 05505, 00002 | Düsseldorf | tel: 02102-481-0 | NSK Corporation | www.us.nsk.com |
| Chennai | tel: 044-4334732 | NSK Steering Systems Europe Ltd. | | Ann Arbor, Michigan | tel: 734-913-7500 |
| Indonesia: | 1011 0 1 1 100 11 02 | Stuttgart | tel: 0771-79082-277 | Sales Offices: | tel. 734-913-7500 |
| P.T. NSK Bearings Manufacturing Indone | | Neuweg Fertigung Gmbh | 1011 011 1 1 00002 211 | | 1-1-704 040 7500 |
| Jakarta | tel: 021-898-0155 | Munderkingen | tel: 07393-540 | Ann Arbor, Michigan | tel: 734-913-7500 |
| Korea: | | Italy: | | Santa Fe Springs, California | tel: 562-968-1000 |
| NSK Korea Co., Ltd. | 1-1-00-0007-0000 | NSK Italia S.P.A. | | NSK American Technical Center | |
| Seoul NSK Korea Co., Ltd., Changwon Pla | tel: 02-3287-0300 | Milano | tel: 02-995-191 | Ann Arbor, Michigan | tel: 734-913-7500 |
| Changwon | tel: 0551-287-6001 | Poland: | 102-333-131 | NSK Precision America, Inc. | |
| Malaysia: | tel. 0331-207-0001 | NSK Europe Ltd. Warsaw Liaison Off | ice | Franklin, Indiana | tel: 317-738-5038 |
| NSK Bearings (Malaysia) Sdn. Bhd. | | Warsaw | tel: 48-22-645-1525, 1526 | San Jose, California | tel: 408-944-9400 |
| Kuala Lumpur | tel: 03-7958-4396 | NSK Iskra S.A. | 101. TOZZTONO IJZJ, IJZO | | www.npa.nsk.com |
| NSK Micro Precision (M) Sdn. Bhd. | | Kielce | tel: 48-41-366-6111 | NKS Steering Systems America | |
| Kuala Lumpur | tel: 03-961-6288 | Spain: | 101.4041-300-0111 | Bennington, Vermont | tel: 802-442-5448 |
| | www.nsk-rhp.co.nz | NSK Spain S.A. | | NSK Latin America Inc. | www.la.nsk.com |
| NSK New Zealand Ltd. Auckland | tel: (09) 276-4992 | Barcelona | tel: 93-575-4041 | Miami, Florida | tel: (305) 477-0605 |
| AUCRIAIIU | 101. (03) 270-4992 | Dalcelolla | tel. 93-375-4041 | Marii, Fonda | 101. (000) 477-0000 |

NSK Ltd. has a basic policy not to export any products or technology designated as controlled items by export-related laws. When exporting the products in this brochure, the laws of the exporting country must be observed. Specifications are subject to change without notice and without any obligation on the part of the manufacturer. Every care has been taken to ensure the accuracy of the data contained in this brochure, but no liability can be accepted for any loss or damage suffered through errors or omissions. We will gratefully acknowledge any additions or corrections.