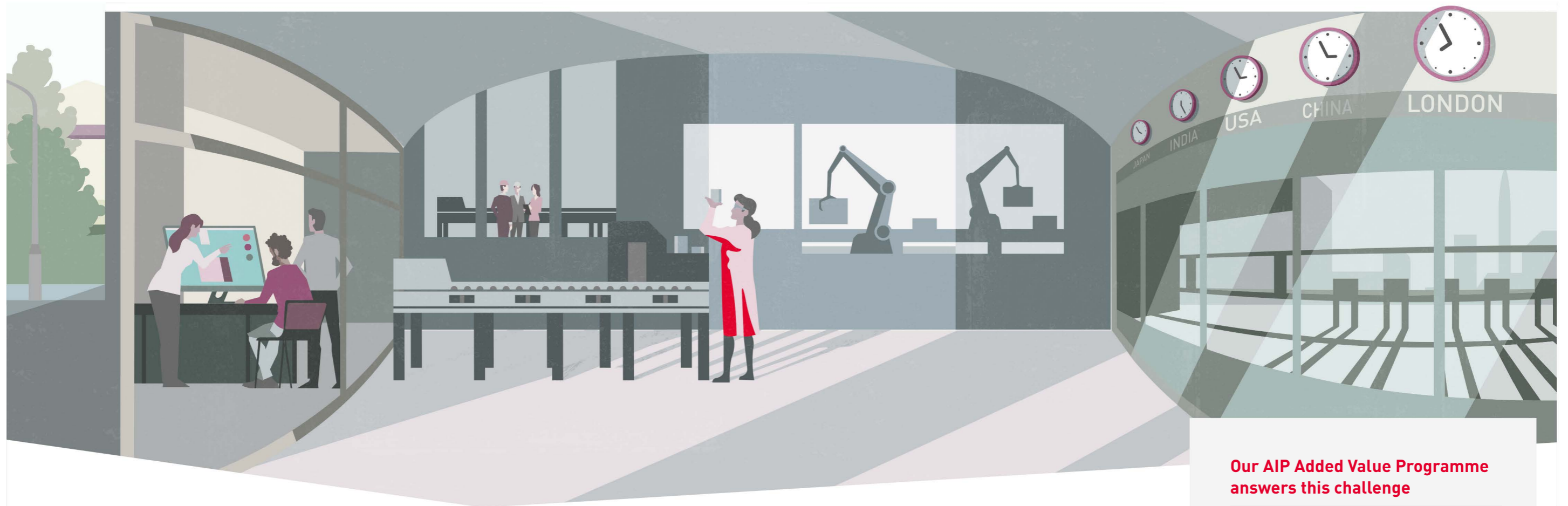


BECAUSE EFFICIENCY IS EVERYTHING
IMPROVEMENT PAYS

END USER



Introducing NSK Your optimisation team



Optimising your machinery to add value to your business

As one of the world's leading manufacturers of rolling bearings, linear technology components and steering systems, NSK is found on every continent – with production facilities, sales offices and technology centres – because our customers appreciate short decision-making channels, prompt deliveries and local service.

Used to drive machinery and keep production lines running, bearings are an essential component of industry everywhere. Unfortunately, their critical importance is often overlooked with purchasing decisions based purely on price. In reality, the unit cost of a bearing represents just 15% of its cost over a lifetime. The other 85% comprises the cost of frequent replacement, breakdowns caused by poor specification, high energy costs from inefficient products and lost production because of downtime.

Each of these is a headache for engineers, line managers and procurement professionals the world over.

By specifying and sourcing the optimal bearing solution, you can reduce or eliminate these problems completely. With the increasing complexity of machinery, the challenge lies in identifying the optimal solution.

Our AIP Added Value Programme answers this challenge

As a business, our whole focus is on improvement, and with AIP we turn this focus into optimising your machinery and equipment to bring you added value and long-term benefits including cost savings and increased productivity.

This is our commitment to you.

We've invested significant resources into taking our AIP programme to the next level – and we're confident that, by working together, we can help take your business to the next level also.



The AIP Value Cycle

Proving that improvement pays

Partnering you towards machine optimisation

Our AIP Added Value Programme is based around a simple proposition: 'improvement pays'. By working with you throughout the AIP Value Cycle, we will help you achieve improvements in machine reliability, productivity and performance, all of which carry a tangible and measurable cost benefit – and we have the tools to prove it! That's what we mean by improvement pays.

The AIP programme comprises five clear steps which are called the Value Cycle:



A customised solution which identifies and quantifies the improvements and savings you'll make

AIP has been an integral part of NSK's offer for many years and is proven to deliver results across all industry sectors worldwide. It's a powerful and practical programme which goes beyond simply the supply of bearings, to the delivery of a cycle of continuous improvement – the AIP Value Cycle. As part of our own commitment to improvement, we've recently enhanced AIP with additional services – including condition monitoring – to add even more value.

Combining NSK's expertise in bearings with your in-depth insight, AIP is a truly collaborative approach. This results in a customised programme which identifies and quantifies the benefits you'll experience – not as vague promises, but in terms of real cost savings. We put a value to the improvements we deliver in terms of performance, productivity and maintenance costs, helping you to save time and money and maintain a competitive edge.

Step 1 – Evaluation: We make site visits to gather data and understand the customers' challenges.

Step 2 – Recommendation: We use our learning, knowledge and experience to create a solution, including anticipated savings for the customer.

Step 3 – Implementation: We can assist, if required, with the installation and testing of our recommended solution and, if appropriate, we can also refine it for improved operation.

Step 4 – Validation: We monitor performance to ensure the anticipated results are being delivered.

Step 5 – Extension: We collate data, share learning and look to expand the service to new applications.

AIP SERVICES

Surveys

- › Stores survey
- › Workshop survey
- › Process map
- › Bearing cross-referencing

Training

- › Product training
- › Application of NSK bearings
- › AIP training
- › Industry-specific training

Selection

- › Application reviews
- › Machine design support
- › OEM part conversion
- › Diagnostics

Inspection

- › Bearing condition analysis
- › Failed bearing analysis
- › Lubrication analysis
- › Material and dimensional analysis

HOW AIP DRIVES IMPROVEMENT FOR YOU



HOW IMPROVEMENT PAYS FOR YOU



+ **An end-to-end service delivering success**

Delivered through a global network of highly skilled and fully Authorised Distributors, AIP offers a complete end-to-end service – from fitting and training to on-going aftersales support. Fully founded in bearing best practice, it is focussed on minimising risk and helping you improve the performance of your equipment and your operations. However specialised or complex your requirements, it's a fully bespoke process guaranteed to deliver success and help you thrive in a challenging and competitive world.

+ **Increased efficiency, effectiveness and reliability**

AIP optimises the efficiency and operational life of bearings, significantly improving machine safety, reliability and environmental compliance. This results in reduced downtime and risk, as well as long-term cost savings.

+ **Maximising productivity**

By reducing failure and downtime, productivity benefits as a consequence, ensuring you're able to meet challenging production deadlines, efficiently and cost-effectively.

+ **Enhanced safety**

By ensuring the optimal specification for your equipment, AIP eliminates unexpected and dangerous bearing failure, helping safeguard both your investment, and your people.

+ **Better skilled personnel**

The AIP Value Cycle is about long-term partnership, not one-off transactions. Our distributor partners work with you throughout, including the delivery of bespoke training to improve the capabilities of your maintenance, procurement and stores personnel.

+ **Optimised inventory, releasing working capital**

With a deeper understanding of your business needs, our specialised distributors are able to optimise your inventory to ensure reliable 'off-the-shelf' availability of critical spares, helping free up working capital.

+ **Added value improvements**

Working with a single supplier adds significant value, in terms of brand consolidation, simplified procurement, streamlined logistics and less risk of stock obsolescence.

+ **Reducing the total cost of ownership**

Ineffective bearings contribute to higher lifetime costs, including energy consumption, downtime, lost productivity and maintenance expenditure. With AIP, the return on investment significantly outweighs the initial cost of the bearing, driving down the life cycle cost.



AIP success story

The challenge – water recirculation pumps

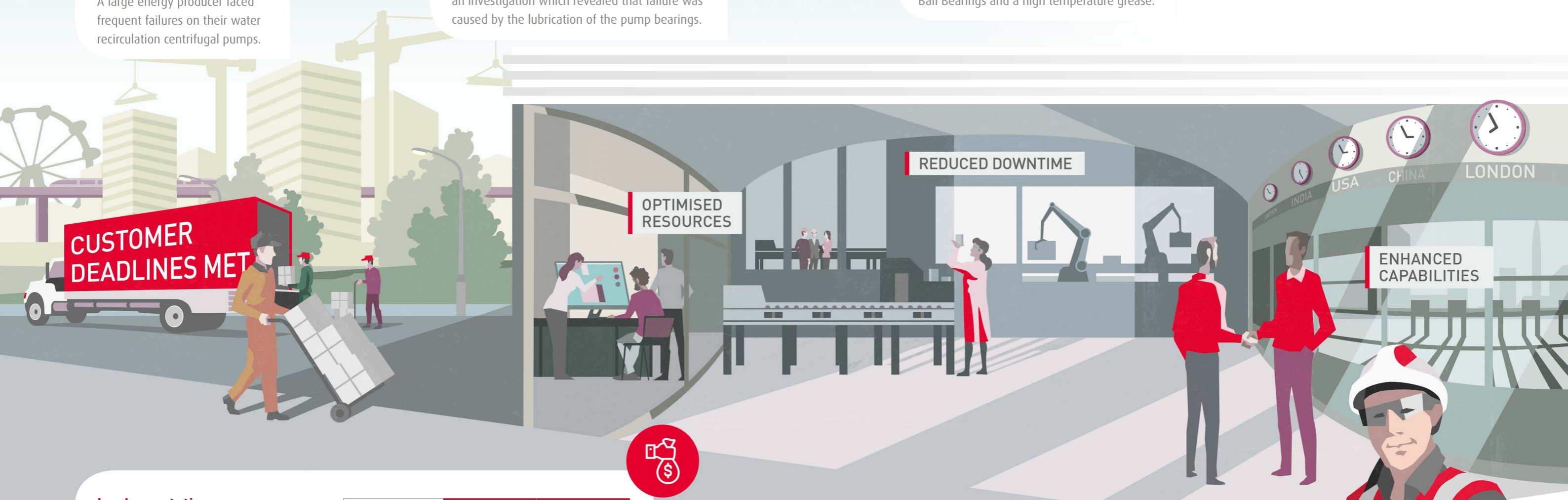
A large energy producer faced frequent failures on their water recirculation centrifugal pumps.

Evaluation

Working with a local distributor, we performed an investigation which revealed that failure was caused by the lubrication of the pump bearings.

Recommendation

We suggested NSK DDU Sealed Deep Groove Ball Bearings and a high temperature grease.



Implementation

We undertook a 6-month trial on three pumps. Within this time, there were zero failures, so we proceeded to full implementation.

Validation

After changing to the NSK solution, there were no failures within the first 12 months, resulting in cost reduced purchasing and maintenance costs.

	Previous Solution	New NSK Solution
Bearing cost	€1,550	€480
Oil	€1,700	€0
Maintenance	€7,200	€0
Downtime	€19,000	€0
Total	€29,450	€480

Extension

Satisfied with the results, the customer asked us to evaluate other parts of their plant with a view to driving benefits across their operations.

Key features of the NSK solution

- › Ultra Clean Steel to extend bearing life by up to 80%
- › Super Finished Raceways improve lubricant distribution and life
- › Patented Seals provide resistance to contamination
- › Pressed Steel Cage ensures the even distribution of lubricant

A continuous journey of improvement



A continuous journey of improvement

As a business, we're working to get better in everything we do, every day and everywhere. Our commitment to improvement is comprehensive, collaborative, and continuous.

Comprehensive

We look to improve in everything we do – from the quality of products and our AIP programme to the way we support our end-users across industry and developing your people.

Collaborative

We work together with our distributors and their customers. Teamwork and partnership is a key part of our philosophy.

Continuous

Improvement is a journey without an end destination. It never stops. And we never stop looking for better ways of supporting you.

As a business, our focus is on improvement – for our people, for our distributors and for you. It's a core philosophy and it's written into our vision and values. It ensures that together, we're stronger and fitter to face tomorrow's challenges.

AIP captures our philosophy and defines our whole approach to improvement. It's also a visible expression of our commitment to working with you in a beneficial partnership. Making small changes to your bearings can have a major impact on your whole business, and AIP is the best vehicle for realising improvements in terms of your equipment, productivity, people and financial performance. Focussed on your business objectives, it helps you create a brighter and more sustainable future – and that's what makes it so important. **Improvement pays.**



Refine, adapt, enhance

Always looking to add value, we work continually to develop and improve our products and services to ensure we deliver the latest in state-of-the-art solutions.



Sustainable improvements for your future

Our focus isn't simply on a quick-fix and immediate gain – it's about incremental and sustainable improvement to deliver long-term benefits.



Start improving with AIP today

AIP is a proven and practical tool that delivers real cost-savings and performance improvements. It works across all sectors, so get in touch and experience the benefits today.



Worldwide Sales Offices

NSK LTD. – HQ, TOKYO, JAPAN
 Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku,
 Tokyo 141-8560, Japan

**INDUSTRIAL MACHINERY BUSINESS
 DIVISION-HQ**
 P: +81-3-3779-7227

AUTOMOTIVE BUSINESS DIVISION-HQ
 P: +81-3-3779-7189

Africa

South Africa:
NSK SOUTH AFRICA (PTY) LTD.
 SANDTON P: +27-11-458-3600

Asia and Oceania

Australia:
NSK AUSTRALIA PTY. LTD.
 MELBOURNE P: +61-3-9765-4400
 SYDNEY P: +61-2-9839-2300
 BRISBANE P: +61-7-3347-2600
 PERTH P: +61-8-9256-5000

New Zealand:
NSK NEW ZEALAND LTD.
 AUCKLAND P: +64-9-276-4992

China:
NSK (SHANGHAI) TRADING CO., LTD.
 JIANGSU P: +86-512-5796-3000

NSK (CHINA) INVESTMENT CO., LTD.
 JIANGSU P: +86-512-5796-3000
 BEIJING P: +86-10-6590-8161
 TIAN JIN P: +86-22-8319-5030
 CHANGCHUN P: +86-431-8898-8682
 SHENYANG P: +86-24-2334-2868
 DALIAN P: +86-411-8800-8168
 NANJING P: +86-25-8472-6671
 FUZHOU P: +86-591-8380-1030
 WUHAN P: +86-27-8556-9630
 QINGDAO P: +86-532-5568-3877
 GUANGZHOU P: +86-20-3817-7800
 CHANGSHA P: +86-731-8571-3100
 LUOYANG P: +86-379-6069-6188
 XI'AN P: +86-29-8765-1896
 CHONGQING P: +86-23-6806-5310
 CHENGDU P: +86-28-8528-3680

NSK CHINA SALES CO., LTD.
 JIANGSU P: +86-512-5796-3000

NSK HONG KONG LTD.
 HONG KONG P: +852-2739-9933
 SHENZHEN P: +86-755-25904886

Taiwan:
TAIWAN NSK PRECISION CO., LTD.
 TAIPEI P: +886-2-2772-3355
 TAICHUNG P: +886-4-2708-3393
 TAINAN P: +886-6-215-6058

India:
NSK BEARINGS INDIA PRIVATE LTD.
 CHENNAI P: +91-44-2847-9600
 DELHI P: +91-124-4838000
 MUMBAI P: +91-22-2838-7787

Indonesia:
PT. NSK INDONESIA
 JAKARTA P: +62-21-252-3458

Korea:
NSK KOREA CO., LTD.
 SEOUL P: +82-2-3287-0300

Malaysia:
NSK BEARINGS (MALAYSIA) SDN. BHD.
 SHAH ALAM P: +60-3-7803-8859
 PRAI P: +60-4-3902275
 JOHOR BAHRU P: +60-7-3546290
 IPOH P: +60-5-2555000

Philippines:
NSK REPRESENTATIVE OFFICE
 MANILA P: +63-2-893-9543

Singapore:
NSK INTERNATIONAL (SINGAPORE) PTE LTD.
 SINGAPORE P: +65-6496-8000

NSK SINGAPORE (PRIVATE) LTD.
 SINGAPORE P: +65-6496-8000

Thailand:
NSK BEARINGS (THAILAND) CO., LTD.
 BANGKOK P: +66-2320-2555

Vietnam:
NSK VIETNAM CO., LTD.
 HANOI P: +84-24-3955-0159

NSK REPRESENTATIVE OFFICE
 HO CHI MINH CITY P: +84-28-3822-7907

Europe
United Kingdom:
NSK EUROPE LTD. (EUROPEAN HQ)
 MAIDENHEAD P: +44-1628-509-800

NSK UK LTD.
 NEWARK P: +44-1636-605-123

France:
NSK FRANCE S.A.S.
 PARIS P: +33-1-30-57-39-39

Germany:
NSK DEUTSCHLAND GMBH
 DUSSELDORF P: +49-2102-4810
 STUTTGART P: +49-711-79082-0
 WOLFSBURG P: +49-5361-27647-10

Italy:
NSK ITALIA S.P.A.
 MILANO P: +39-299-5191

Netherlands:
NSK EUROPEAN DISTRIBUTION CENTRE B.V.
 TILBURG P: +31-13-4647647

Poland:
NSK REPRESENTATIVE OFFICE
 WARSAW P: +48-22-645-1525

Russia:
NSK POLSKA SP. Z O.O.
 SAINT-PETERSBURG P: +7-812-332-5071

Spain:
NSK SPAIN S.A.
 BARCELONA P: +34-93-289-2763

Turkey:
NSK RULMANLARI ORTA DOGU TIC. LTD. STI.
 ISTANBUL P: +90-216-477-7111

United Arab Emirates:
NSK BEARINGS GULF TRADING CO.
 DUBAI P: +971-4-804-8207

North and South America
United States of America:
NSK AMERICAS, INC. (AMERICAN HQ)
 ANN ARBOR P: +1-734-913-7500

NSK CORPORATION
 ANN ARBOR P: +1-734-913-7500

NSK PRECISION AMERICA, INC.
 FRANKLIN P: +1-317-738-5000
 SAN JOSE P: +1-408-944-9400

NSK LATIN AMERICA, INC.
 MIAMI P: +1-305-477-0605

Canada:
NSK CANADA INC.
 TORONTO P: +1-905-890-0740
 MONTREAL P: +1-514-633-1220
 VANCOUVER P: +1-877-994-6675

Argentina:
NSK ARGENTINA SRL
 BUENOS AIRES P: +54-11-4704-5100

Brazil:
NSK BRASIL LTDA.
 SUZANO P: +55-11-4744-2500
 BELO HORIZONTE P: +55-31-3274-2591
 JOINVILLE P: +55-47-3422-2239
 PORTO ALEGRE P: +55-51-3346-7851
 RECIFE P: +55-81-3326-3781

Peru:
NSK PERU S.A.C.
 LIMA P: +51-1-493-4385

Mexico:
NSK RODAMIENTOS MEXICANA, S.A. DE C.V.
 MEXICO CITY P: +52-55-3682-2900
 MONTERREY P: +52-81-8000-7300

To find your regional website, visit NSK global at www.nsk.com

