

NAK Successful Cases of Industrial Gearbox Seals

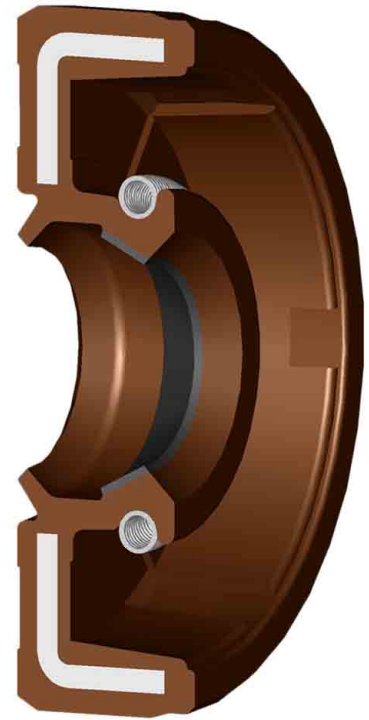
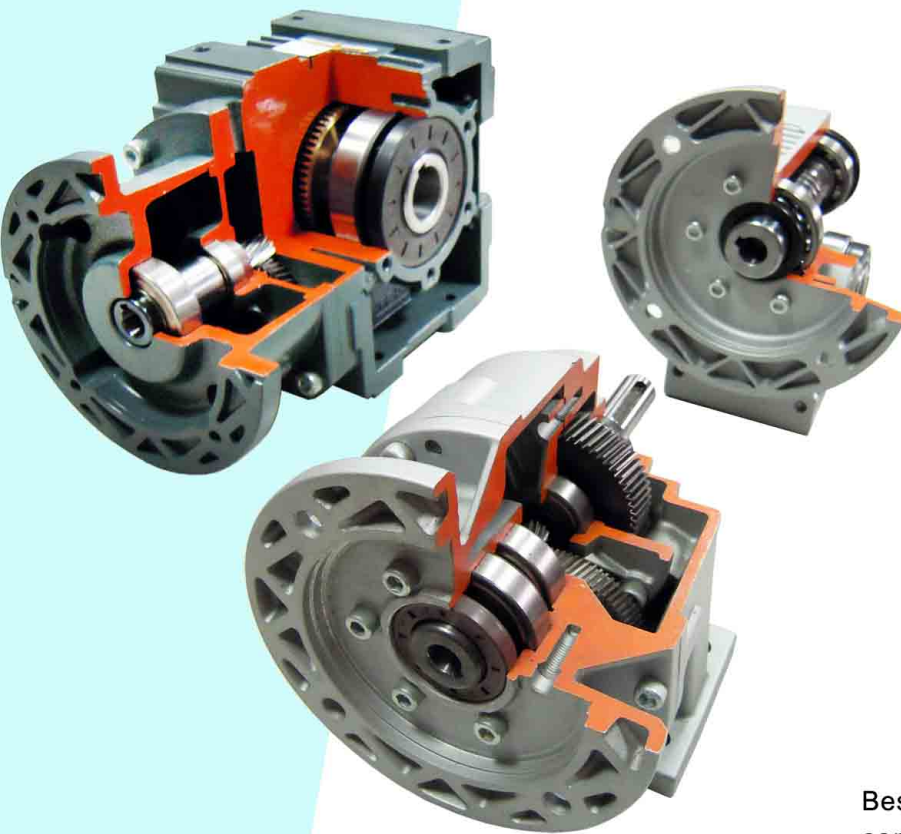


ISO-9001/14001
ISO/TS-16949
OHSAS-18001



World Class Brand World Class Manufacturing

NAK's High Performance Sealing Solutions for Industrial Gearboxes



★ Gear reducers are supplied by TPG and photos are taken by NAK.

The modern gearboxes are used to provide speed and torque conversions from a rotating power source to another device. However, most motors rotate too fast, and lack enough rotation force to run the machines. A speed reducer will take to reduce the motor speed to an optimum rotation speed for each machine's application.

NAK sealing solutions for industrial gearboxes include rotary seals, oil gauge seals and end caps.

A typical gearbox application will have two rotary seal styles: the input seal and the output seal. The input seal is usually a higher speed seal. These seal designs are typically used to retain lubricants / liquids and exclude dirt / contaminants in higher shaft speed applications. NAK's standard designs include: single lip, dual-lips, and single and double shell designs. Some of them are designed with a bonded PTFE sealing lip can accept high surface speeds, pressure and dry running conditions and have higher wear resistance and service life.

Besides, spring-loaded seals provide longer, more consistent service life in radial applications than non-spring loaded designs, and better seal ability over a wide range of conditions.

Material selections include Nitrile rubber (NBR), Hydrogenated Nitrile rubber (HNBR), Fluorinated rubber (FKM) and additional elastomer compounds to meet some extreme requirements are available upon request.



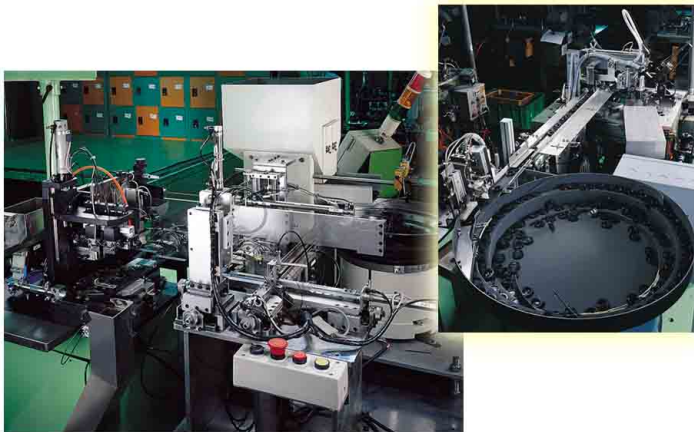


Why should I choose NAK sealing solutions?



Expert and reliable supplier

NAK is an ISO-9001/14001, TS-16949 and OHSAS-18001 registered manufacturer of sealing solutions for industrial gearboxes. NAK offers sealing solutions which are developed with a series of advanced lab instruments and latest technologies to meet or exceed the ASTM, DIN, BS, and the SAE international standards. NAK also implements 6 σ (Six Sigma) management to advance sophisticated products and higher quality for years.



Dedicated R&D team and support

NAK has a strong and dedicated R&D team to offer technical consultation and support for mutual connection. To enhance R&D capability, NAK invests in modern software and hardware development such as FEA (Finite Element Analysis), SCAD, in house dynamic test center and etc. to build up theoretical analysis for operating conditions, decrease the failure rates during trial runs, and improve the efficiency of new product development.



Comprehensive products and designs

NAK offers a comprehensive range of industrial gearbox seal types and sizes including custom-made products. Special elastomer compounds are available to fit different applications. It's cost-effective for customers to find correct sealing solutions for industrial gearbox applications.

State-of-the-art Technologies

NAK has a complete line of equipment and ingredient research lab. We implement rubber testing method including processibility of unvulcanized rubber, hardness of plastic and rubber, material tensile strength and adhesive strength, heat aging / oil immersion / fuel immersion / low temperature properties / compression set, rebound properties / microscopy of compound dispersion, FT-IR analysis, and etc.

Efficiency manufacturing process

NAK has implemented full automation and computerization in manufacturing process by deploying machineries such as check boarded machines, automatic spring loading machines, automatic packaging machines, automatic storage system and etc. NAK keeps improving efficiency and capability to satisfy and even exceed requirements from different OE customers.



NAK's Partnership With OEM Customers

With more than 35 years of experience in manufacturing sealing products, NAK has lots of successful projects in industrial gearbox seals with OEM customers all over the world.

In USA, NAK provides industrial gearbox seals to Hub City whose standard product offering is one of the broadest in the industry. Hub City provides power transmission products for use in recreation, transportation, military, packaging, construction, communication, material handling, medical and food processing equipment.

NAK also offers industrial gearbox seals to Hydro-Gear which is a global leader in the design and manufacture of precision drive systems. Working in partnership with OEMs worldwide, Hydro-Gear produces an extensive line of high-performance, efficient hydrostatic transmissions and transaxles; gear reduction drives; variable displacement piston pumps and wheel motors; electric drive systems, and infinitely variable transmissions for industrial, commercial, and consumer markets.



In Thailand, NAK cooperates with David Brown which is a leading global gearing expert. David Brown speed reducer gearboxes combine rigidity with strength and virtually eliminate backlash and friction. The David Brown speed reducer range operates up to 8,300kW and is a robust and durable product with low maintenance costs.



In Korea, NAK cooperates with Samyang Reduction Gear Corp., which has won the reputation as No.1 professional manufacturer in domestic gear reducer market. NAK also provides industrial gearbox seals to Haisung Industrial Systems Co., Ltd. which is a specialized company in industrial reducers for iron-works equipment, industrial equipment and unloading crane. Besides, NAK collaborates with SPG Co., Ltd. which is specialized in manufacturing gear systems.





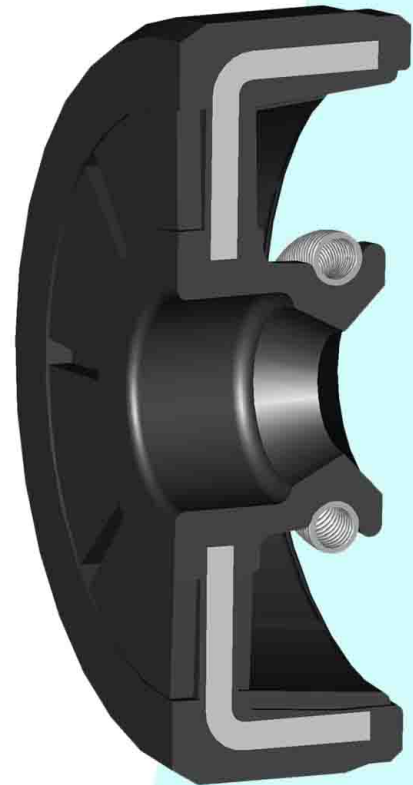
In Taiwan, NAK cooperates with LI-MING Machinery Co., Ltd. , Apex Dynamics, Inc. , Cheng Pang Precision Corp., TPG Motors & Drives, Tung Lee Electrical Co., Ltd. and etc.

LI-MING Machinery Co., Ltd. is specialist in design, manufacturing of wide range of high-tech speed reduction motor and helical gear reducers, worm gear reducers and planetary gear reducers.

Apex Dynamics, Inc. is a worldwide leader company of manufacture robots for plastics injection molding machines. Based on more than twenty years of accumulated manufacturing and marketing experiences, plus the high level of technical producing abilities, Apex Dynamics, Inc. designed and built a technically advanced, high speed, low backlash servo application planetary gearbox.

In addition, Cheng Pang Precision Corp., TPG MOTORS & DRIVES, and Tung Lee Electrical Co., Ltd. are all professional manufacturers in gearbox products.

In China, NAK cooperates with many domestic original equipment manufacturers of industrial gearboxes in different applications.



NAK has developed many successful projects no matter in OEM or MRO. NAK has ability to design and manufacture all seals to meet customer's requirements. For more information, please contact with us at www.nak.com.tw.



Subsidiary map

Existing subsidiaries worldwide

● Factory

● Service office & warehouse



Taiwan (NAK Headquarters)

NAK SEALING TECHNOLOGIES CORPORATION
No.336, Industrial Road, Nankang Industrial Zone, Nantou
City 54065, Taiwan
TEL : 886-49-2255011
FAX : 886-49-2250035
E-mail : service@mail.nak.com.tw
www.nak.com.tw

China

KUNSHAN MAOSHUN SEALING PRODUCTS INDUSTRIAL CO., LTD.
No.271, Xingpu Road, Zhoushi Town, Kun Shan City,
Jiangsu Prov., China 215337
TEL : 86-512-57666240; 86-512-57665788
FAX : 86-512-57665827; 86-512-57664409
E-mail : sales@nak.com.cn
www.ksnak.com

Iran

KISH NAK OIL SEAL MFG. CO., LTD.
No.67, Eshghyar St. Khorramshahr Ave.,
Tehran 15339, Iran
TEL : 98-21-88761965
FAX : 98-21-88741319
E-mail : kishnak@parsonline.net

Thailand

NAK SEALING PRODUCTS(THAILAND) CO., LTD.
120/36 Moo 12 Soi 21/2 Kingkaew-Bangplee Road, Tumbul
Rachatewa, Ampur Bangplee Samutprakarn 10540, Thailand
TEL : 66-2-750-1988
FAX : 66-2-750-1868
E-mail : sales@mail.thainak.com

Russia

NAK INTERNATIONAL LTD.
Russia, Postal Index 143956, Moscow Region, Balashiha,
Mikroraion Nikolsko-Arhangelskiy, Vishnyakovskoe Shosse,
56, "NAK INTERNATIONAL LTD."
TEL : 7-495-545-94-00
FAX : 7-495-646-79-29
E-mail : info@naksealing.ru
www.naksealing.ru

India

NAK SEALING TECHNOLOGIES (INDIA) PRIVATE LIMITED
P-1, Phase II, Dr.Vikram Sarabhai Industrial Estate,
Thiruvanniyur, Chennai - 600 041, Tamilnadu, India.
TEL : 91-44-64586657; 91-44-64586661
FAX : 91-44-24540254
E-mail : marketing@nakindia.com

Brazil

NAK DO BRASIL INDUSTRIA E COMERCIO DE COMPONENTES DE VEDACAO LTDA
Rua Soldado Benedito Eliseo Dos Santos, NRO 10 CEP
02177-020, Sao Paulo S.P, Brazil
TEL : 55-11-3807-3001
FAX : 55-11-3807-3002
E-mail : nakbrasil@nakbrasil.com.br
comercial@nakbrasil.com.br

Australia

NAK TOTAL SEALING SOLUTIONS AUSTRALIA
Unit 1-17 Buttonwood Place,
Willawong QLD 4110, Australia
TEL : 61-7-3272-0266
FAX : 61-2-6674-2516
E-mail : sales@sealingtechnologies.net
www.naksealingtechnologies.com

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