

Press release

## **Bearings with black oxide finish – Increased performance in critical applications**

*Steyr, Austria, January 2019.* At this year's Hannover Messe in Germany, bearing manufacturer NKE Austria GmbH presents bearings with black oxide finish. The protective layer improves run-in and wear characteristics and protects against environmental effects. Especially in critical applications such as wind turbine gear boxes, black oxide finish is a cost-effective and technically viable means of prolonging the service life and performance of rolling bearings.

The black oxide finish forms a protective layer for steel parts. In a multistage chemical process, the surface layer of the treated parts is converted into a 1 to 2 micrometer thin mixed ferrous oxide layer that causes the characteristic black appearance. Black oxide finished bearing components feature a set of special technical characteristics, especially in the case of components that move relative to each other. Multiple protective effects can be achieved if only one functional element (typically the rolling elements) is treated. For best effect, however, all functional surfaces of a rolling element bearing, including the inner and outer ring as well as the rolling elements, should be black oxide finished.

Black oxide finishing is already an established method in other industries. NKE uses this technology to further improve the technical properties of rolling bearings. The method has proven itself in practice especially with full complement cylindrical roller bearings, but other types of rolling bearing are also black oxide finished, depending on the application. NKE offers a large number of black oxide finished rolling bearings. At NKE, this finish is used especially for cylindrical roller bearings, which then carry the suffix SQ94. The most common variants are SQ94B (rolling elements black oxide finished) and SQ94-D (all bearing components except for the cage black oxide finished).

NKE offers both standard and special bearings for all industrial applications. A wide range of standard bearings is available from stock or at short production lead-times. NKE also provides customized products and solutions. In addition to product development and

application engineering, NKE provides a full range of technical services, consulting, documentation and training. NKE's products are distributed through 12 international offices and more than 240 distribution outlets in 60 countries.

**Picture:**

Full complement cylindrical roller bearing NCF1880-SQ94D from NKE

**NKE exhibiting at Hannover Messe 2019:**

Integrated Automation, Motion & Drives (IAMMD), 1 to 5 April 2019, Hanover, Germany:  
Hall 22 Stand D19

**Company information:**

NKE Austria GmbH is a bearing manufacturer with headquarters in Steyr, Austria. The company was founded in 1996 by a group of senior staff members of former company Steyr Wälzlager. Spanish bearing manufacturer Fersa Bearings, which is specialised in the automotive sector, acquired 49 percent in NKE in 2016 and completed the acquisition with 100 percent at the end of 2018. NKE offers both standard and special bearings for all industrial applications. Engineering, product development, production and final processing of components, assembly, quality assurance, logistics, and sales and marketing are centralised at its Steyr headquarters. The factory in Steyr is certified to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001. A wide range of standard bearings is available from stock or at short production lead-times. NKE also provides customized products and solutions. In addition to product development and application engineering NKE provides a full range of technical services, consulting, documentation and training. NKE's products are distributed through 12 international offices and more than 240 distribution outlets in 60 countries.

**Contact:**

NKE AUSTRIA GmbH  
Im Stadtgut C4  
4407 Steyr, Austria  
Tel.: +43 7252 86667  
Fax: +43 7252 86667 59  
E-mail: [office@nke.at](mailto:office@nke.at)  
Internet: [www.nke.at](http://www.nke.at)

**PR Contact:**

TPR International  
Christiane Tupac-Yupanqui  
PO Box 11 40

82133 Olching, Germany  
Tel.: +49 (0)8142 44 82 301  
E-mail: [c.tupac@tradepressrelations.com](mailto:c.tupac@tradepressrelations.com)  
Internet: [www.tradepressrelations.com](http://www.tradepressrelations.com)

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