

Wear-Resistant and Quiet: igus Develops a New Two-Component Ball Bearing

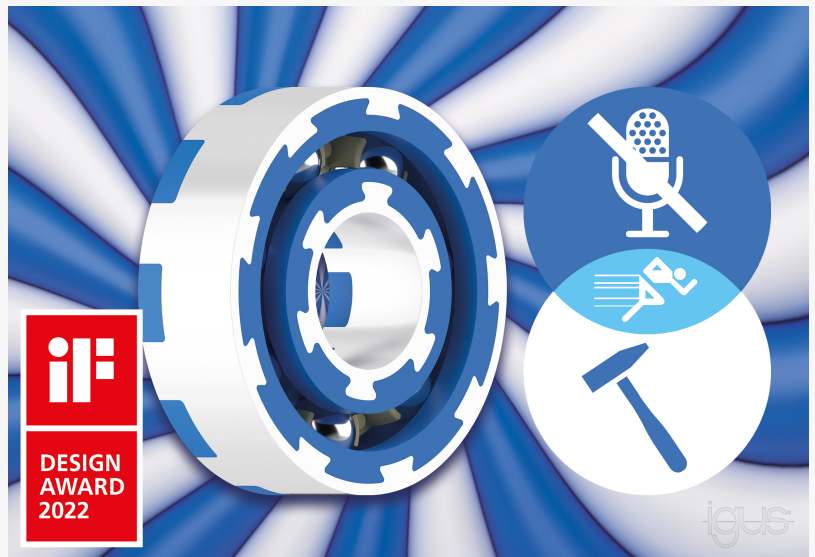
The combination of design and material creates a quiet, durable tribo ball bearing for high speeds

EAST PROVIDENCE,, RI, UNITED STATES, June 23, 2022 /EINPresswire.com/ -- As a result of continuous research and development, igus is now introducing an innovative two-component (2K) ball bearing. The xiros® bearing, which requires no lubrication or maintenance, combines a wide range of properties. It is not only wear-resistant but also remains quiet and dimensionally stable even at high speeds. This means that the new 2K plastic ball bearing can be used in such applications as fans and blowers.

At high speeds, ball bearings require resistant materials to withstand the balls' high centrifugal forces. However, hard materials combined with stainless steel balls can cause vibrations and become noisier. In order to achieve these precise properties, igus combines different designs and materials in an innovative way. The new xiros two-component plastic ball bearing requires no lubrication or maintenance and guarantees quiet operation even at continuously high speeds.

Hard shell, soft core

In the new 2K ball bearing, the blue layer made of [xirodur® D180](#) dampens noise. It is also

The igus logo is displayed in a large, orange, stylized font. The letters are thick and rounded, with a horizontal line passing through the middle of the 'i' and 'g'.

The igus two-component ball bearing requires no lubrication or maintenance and combines strength and quiet operation, making it ideal for high speeds. (Source: igus GmbH)

combined with a hard shell, giving the soft, wear-resistant inner material high dimensional stability. Because the soft components are cast into the hard shell of both races, the balls always run on the soft, high-performance plastic during rotary movement and are supported by the shell. The design with undercuts ensures high adhesion for both materials and provides additional stability. Ball spacing is maintained with a wear-resistant cage made of the igus [iglide®](#) [I3](#) plain bearing material.

The 2K ball bearing operates more smoothly and quietly at high speeds (in blowers or fans, for example) than standard ball bearings. In igus's own test laboratory, tests showed three times less noise at high speeds than standard xiros ball bearings.

"During testing, the new xiros 2K bearing proved 9dB quieter, roughly half the volume of a B180 ball bearing," says Lena Woelke-Glomb, a developer at igus. Unlike metallic solutions, the tribologically optimized igus bearings require no additional lubrication to maintain this smooth operation. Even though no lubrication is needed, the tribo-optimized bearing achieves a long service life with low operating costs. The 2K ball bearing is available with an inner diameter of 10 millimeters, followed by the expansion to the standard range with inner diameters of 5 to 12 millimeters. Customized solutions and sizes can also be produced. An online configuration will be available in the next few months.

Award-winning design

Based in Hannover since 1954, the iF Product Design Award is one of the world's most prestigious design competitions sponsored by the iF International Forum Design GmbH. The 132-member panel of expert judges evaluated over 11,000 submissions from 57 countries this year. The combination of material and design impressed the iF Product Design Awards judges, selecting the igus two-component ball bearing as a [winner](#).

See the xiros two-component ball bearings in this video: <https://www.igus.com/info/xiros-two-component-ball-bearing>

ABOUT IGUS:

igus GmbH develops and produces motion plastics. These self-lubricating, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings as well as lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 35 countries and employs 4,900 people across the globe. In 2021, igus generated a turnover of €961 million. Research in the industry's largest test laboratories constantly yields innovations and more security for users. 234,000 articles are available from stock and the service life can be calculated online. In recent years, the company has expanded by creating internal startups, for example ball bearings, robot drives, 3D printing, the RBTx platform for Lean Robotics and intelligent "smart plastics" for Industry 4.0. Among the most important environmental investments are the "chainge" program – recycling of used e-chains and the participation in an enterprise that produces oil from plastic waste.

Michael Rielly
igus®
+1 800-521-2747
mrielly@igus.net

This press release can be viewed online at: <https://www.einpresswire.com/article/577955286>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2022 Newsmatics Inc. All Right Reserved.