

30 years of iglide® bearings: From simple plastic bearings to high-tech machine components

East Providence, Rhode Island – February 6, 2014 – igus® is celebrating the 30th anniversary of its iglide plastic bearing material. Three decades ago, igus presented its first iglide plastic bearing – a lubrication and maintenance-free polymer bearing for dry running applications. After decades of research with the plastic material and its tribological properties (optimized for friction and wear characteristics), today, igus has the world's largest range of tribo-optimized plain, spherical and linear plastic bearings.

The core of the igus brand is its range of tribo-polymers 49 years in the making. Unlike with other materials, it is possible to change and customize the features of these plastics. Plastics offer tremendously more possibilities to fulfill the individual specifications of machine applications in comparison to metal. These plastic bearings cost and weigh less than their metal counterparts. They also run longer in harsh environments and under adverse conditions.

Three decades of iglide development

Thirty years ago, plastics expert igus introduced the particularly shock-resistant, fiber reinforced iglide G300, a pioneer among the now 33 different iglide materials. Today, the company has the world's largest range of tribo-optimized plastic bearings with more than 12,000 different bearing types available from stock. The spectrum ranges from inexpensive general purpose iglide bearings to high temperature resistant, underwater approved, or FDA compliant bearings. Millions of iglide bearings are replacing metallic bushings that require lubrication. They are used across all sectors of industry: in cars, machine tools, household appliances, pumps, fitness equipment, mountain bikes, and in medical technology and aerospace equipment.

Maintenance-free, dry-running technology

All iglide high-performance plastics are designed the same way. The base is made up of a thermoplastic matrix material. The addition of strengthening fibers increases the amount of pressure resistance. Integrated solid lubricants grease the bearings independently and therefore lower friction. Due to the integrated lubricants throughout the entirety of the plastic material, iglide bearings do not ever require lubrication. Millions of microscopic lubricating particles are

embedded in tiny chambers inside the matrix material, and from there are dispensed in very low quantities as friction occurs. All plain bearing components are not applied in layers, but homogeneously mixed with one another, resulting in good wear qualities with any type of movement.

Research and development for durable, safe machines

igus continuously develops new materials and products with the aim of increasing machine safety and durability, while simultaneously lowering costs. Interacting surfaces in relative motion are studied daily in the igus lab in Cologne, Germany. igus engineers develop about 100 new plastic compounds annually, each with different qualities, such as temperature/chemical resistance, moisture resistance, or cleanroom compatibility. The driving force behind this innovation is the worldwide existing damages in machines and plants caused by friction and wear. The igus vision of “motion plastics,” or plastic components that move machines safely over a long period of time without lubrication, helped build a strong engagement in research and development.

Always the right material – calculate online

The durability, friction, and wear characteristics of all iglide high performance materials are continuously tested in the 19,000 ft² igus company laboratory. In 2012 alone, 10,000 plain bearing tests were carried out. This huge bank of knowledge has grown over the decades, and is documented in a unique database. Test results of material research are directly entered into igus’ range of online tools. With the online tools, anyone can directly determine the ideal bearings material and calculate the exact lifetime of the individual components. Additionally, the igus dry-tech sample box is now available to all customers – included templates allow different materials to be filtered according to a variety of criteria including temperature and chemical resistance or food and drug contact. The online tools and sample boxes allow for the optimal material for an individual application to be selected. Visit www.igus.com/iglide30 for more information.

About igus®

igus® develops industry-leading Energy Chain® cable carriers, Chainflex® continuous-flex cables, DryLin® linear bearings and linear guides, iglide® plastic bushings, and igubal® spherical bearings. These seemingly unrelated products are linked together through a belief in making

functionally advanced, yet affordable plastic components and assemblies. With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cable since 1989, igus provides the right solution from over 80,000 products available from stock. No minimum order required. For more information, contact igus at 1-800-521-2747 or visit www.igus.com.

Captions:

Picture PR-US-iglide30-30yrsofplasticbearings-01.jpg, igus® Inc.

30 years ago, the tribo-polymer expert igus® presented its first lubrication and maintenance-free polymer plain bearing under the name of iglide®: iglide® G300 became pioneer for the 40 different iglide® materials with specific features that exist today.

Picture PR-US-iglide30-30yrsofplasticbearings-02.jpg, igus® Inc.

The durability, friction, and wear characteristics of all iglide high performance materials are continuously tested in the 19,000 ft² igus® company laboratory.

Picture PR-US-iglide30-30yrsofplasticbearings-03.jpg, igus® Inc.

Online or offline: Thanks to the dry-tech sample box and the online tools, the customer can quickly find the most appropriate iglide® plain bearing for their application.

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