

## **The lightest linear guide in the world at the 2015 Hannover Messe**

### **Carbon rails from igus provide "light" run**

**Hanover/Cologne, April 15, 2015 – Light, lighter, carbon: Whether in the aircraft or automotive industry, when it comes to weight savings, design engineers increasingly rely on carbon fibre reinforced plastic, in short carbon. To meet the demands in this field, igus has developed a drylin W profile made of carbon, which is presented at the Hannover Messe 2015 alongside more than 100 other novelties.**

Very lightweight, high stiffness and non-magnetic – these are the main advantages of the carbon fibre reinforced plastic (CFRP) over metal. For applications where these requirements are essential, such as aerospace or medical technology, igus now offers the lightest linear guide in its magnitude made of carbon which is available for up to 2000 mm stroke. Here, it is not only the support material that is made of CFRP, but the whole rail, where the system consisting of rail and carriage is up to 40 percent lighter than one with an aluminium rail and even up to 60 percent lighter than one with a steel rail. This weight saving may constitute money for users, especially in the aerospace and automotive industries. Other industries too where high dynamic movements play a role, such as robotics, are increasingly utilising the weight advantages of CFRP components.

Since igus has been offering shafts made of carbon for more than ten years, the plastics expert has already done a lot of testing and has gathered experience. "Here, it has been shown that iglidur L250 has the optimum wear and friction coefficients in combination with carbon shafts," said Stefan Niermann, head of division drylin linear and drive technology. "According to the test results so far, this also applies to the new rails." Like all products from igus, this novelty is also subjected to extensive tests in order to provide reliable information on the coefficients of friction and service life.

**Available as a completely metal-free toothed belt axis**

The high profile geometry of the carbon rail enables an attachment by means of clamping jaws, which makes a complicated mechanical reworking superfluous. Moreover, the rail with high profile is the basis for a completely metal-free toothed belt axis, which is available in lengths up to 1000 mm. Here a deflection consisting of a carbon axis, a plastic gear and xiros plastic ball bearings from the igus range is used. Thus, it can be used without restrictions in X-ray equipment in medical technology. Here a major feature is the carbon guide, which like all products from igus does not require any external lubrication and thus is maintenance free.

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**ABOUT IGUS:**

igus GmbH is a globally leading manufacturer of energy chain systems and polymer plain bearings. The Cologne-based family business has offices in 36 countries and employs around 2,700 people around the world. In 2014, igus generated a turnover of 469 million euros with motion plastics, plastic components for moving applications. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms 'igus, e-ketten, e-kettensysteme, chainflex, readycable, easychain, e-chain, e-chainsystems, energy chain, energy chain system, flizz, readychain, robolink, pikchain, triflex, twisterchain, invis, drylin, iglidur, igubal, xiros, xirodur, plastics for longer life, CFRIP, dryspin, manus and vector' are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.

**Caption:**



**Image PM1515-1**

The lightest linear guide in the world. At the Hannover Messe, igus shows its drylin W rail made of carbon, which is also available as a completely metal-free toothed belt axis. (Source: igus GmbH)