

"How long will my printed gear last?" New igus online tool predicts lead time

Free online expert provides concrete statements on the service life of wear-resistant 3D-manufactured gears

How long will my gear last? To answer this question, igus has now developed the gear service life calculator for its 3D-printed gears made of the laser sintering high-performance plastic iglidur I3. With the new online tool, the user receives a concrete statement in a few seconds about the service life of the wear-resistant part.

In some gearboxes, gears are used to change torque or speed through one or more stages. Since gears with complex involute teeth are often required, which cannot be designed without aids, igus developed the gear configurator two years ago. This was expanded last year with the capability to configure double gears. In a few steps, the user only needs to enter the specifications of the required gear, such as the tooth module, number of teeth, width and inner diameter of the hole. This automatically displays a 3D model that can be exported as a STEP file. By uploading the file in the igus 3D printing service (www.igus.eu/3Dprintservice), the configured gear made from the extremely durable laser sintering material iglidur I3 can be ordered immediately from igus. So that the customer can also determine the service life of his wear-resistant gear, igus has now developed the gear service life calculator. By means of this, the user receives in just three steps a concrete statement about the service life and the application limits of his gear pairing.

Get the precise service life in just three steps

In step 1, the user must first enter the number of teeth, the width and the tooth module of the gear pairing again. Here the customer can choose between iglidur I3 gears, a metal or another plastic. In step 2, the tool asks for the speed and torque of the large or small gear, depending on the which gear's values are available. Step 3 is to determine the duty cycle of the printed gear, the mode of operation, the ambient temperature and the safety factor. Based on the specified parameters, the new online tool can determine the service life of the 3D printed gear in seconds. This makes maintenance predictable in advance.

Printed gears convince in the pivot test

The high-performance plastic iglidur I3 has been specially developed for the production of wear-resistant parts such as gears in the laser sintering process. The material is abrasion-resistant and durable, as shown by an experiment in the company's own 3,800 square metre test laboratory. Here, the gear made of iglidur I3 took on a POM injection-moulded gear and a POM machined gear in a pivot test at 1440°C at a speed of 0.1 m/s and a torque of 2.2 Nm. All gears had 30 teeth and a width of 16mm. While the injection-moulded gear made of POM failed after just 4,000 cycles and the machined POM gear broke down after 12,500 cycles, the iglidur I3 gear withstood almost 20,000 cycles.

The gear service life calculator can be used for free at www.igus.eu/gear-expert.

PRESS CONTACT:

Shery George

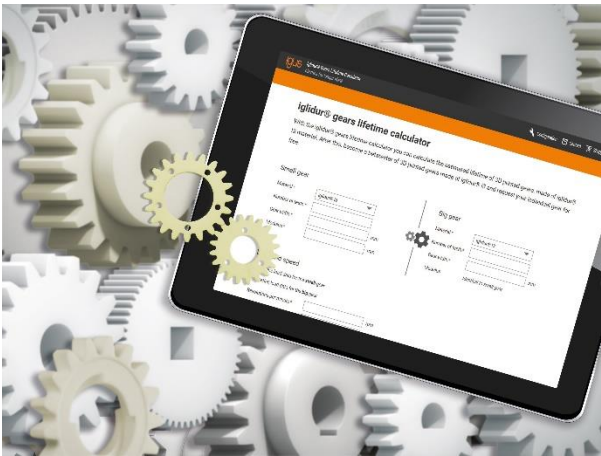
igus (India) Private Limited
36/1, Sy. No. 17/3
Euro School Road,
Dodda Nekkundi Industrial Area - 2nd
Stage
Mahadevapura Post
Bangalore - 560048
Phone : +91-80-45127827 (Direct)
Cell : +91-9379517885
sgeorge@igus.in
Visit us on www.igus.in

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 35 countries and employs around 4,150 people around the world. In 2018, igus generated a turnover of 748 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", "Apro", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain-systems", "e-ketten", "e-kettensysteme", "e-skin", "flizz", "igear", "igidur", "igubal", "kineKIT", "manus", "motion plastics", "pikchain", "plastics for longer life", "readychain", "readycable", "ReBeL", "speedigus", "triflex", "roboLink", and "xiros" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.

Caption:



Picture PM3019-1

The service life of wear-resistant 3D printed gears now calculated with new online tool in seconds. (Source: igus GmbH)