

Cost-effective & fast: igus uses 3D-printed injection moulding tools in production

Produce special parts, quickly at low cost and in large numbers.

Injection moulding is an efficient method for production of high-performance plastics in moving applications. The injection moulding tools required in this regard are usually manufactured from steel, at costs that reflect this. With the first 3D printed injection moulding tool in plastic, igus has now developed a cost-saving alternative for production up to 500 pieces.

As an injection moulded part, machined from bar stock, or printed in the additive manufacturing – igus offers users a wide variety of ways to get its lubrication-free and maintenance-free plastic plain bearings in the required form quickly and without huge costs. Therefore every manufacturing method has its own advantages: Whereas large quantities of any iglidur material can be produced in the injection moulding process, cheaper special forms can be made from bar stock. With additive manufacturing cost-efficient, smaller batches can be produced with special iglidur 3D print materials. Now, the motion plastics specialist has combined the two methods to offer the customer the freedom in the choice of materials, and at the same time to enable the production of special forms in larger quantities.

The best of both worlds

By using 3D printing igus is now able to produce customer-specific injection moulds made of high-performance plastics in a short time. With the SLS process the appropriate tool can be produced quickly and used in the existing injection moulding machine. The prerequisite is that the injected moulded parts must have simple geometries. To make injection moulded parts the customer has a wide range of iglidur materials available that are tribologically-optimised and predictable online: from chemically and temperature resistant up to the highest performance materials for almost any movement. With the printed mould tools, the customer gets the possibility of obtaining the required special part quickly and cost effectively even in larger numbers whilst maintaining application suitability. Distinct advantages arise therefore, especially in the test phase.

Users who want to test samples for subsequent batches are often faced with the challenge in terms of bar stock or 3D printed products, because these parts clearly differ from the moulded parts. For this reason, the final endurance test is often done with injection moulded parts. Due to the 3D-printed injection mould, the special part is very close to the series product in the test phase and the costs are reduced considerably at the same time.

Captions:



Picture PM3816-1

With 3D-printed injection moulds, the user can now get his lubrication-free and maintenance-free special part quickly and at a low cost even in larger quantities.

(Source: igus GmbH)

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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 35 countries and employs around 2,950 people around the world. In 2015, igus generated a turnover of 552 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", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "e-skin", "energy chain", "energy chain systems", "flizz", "iglide", "iglidur", "igubal", "invis", "manus", "motion plastics", "pikchain", "readychain", "readycable", "speedigus", "triflex", "twisterchain", "plastics for longer life", "robolink", "xiros", "xirodur" und "vector" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.