

Automotive industry: originals from Cologne rather than copies from anywhere else

igus presented numerous innovations at the IAA – a new material for engine compartments, clip bearings for multiple-joint hinges, a coupling rod for gears, to name but a few: "The best Chinese is from Cologne"

There's hardly a vehicle around today that doesn't have plastic plain bearings in place of metallic plain and rolling bearings. The application spectrum ranges from simple seating system applications to applications under a high thermal load in the engine compartment, in gear sticks or in the exhaust systems of modern diesel engines, for example. At the International Motor Show (IAA) in Frankfurt, igus GmbH presented numerous new automotive bearing solutions which, "Increase service life and lead to procurement savings of up to 70 percent," according to the company. All the components are developed, tested and manufactured at the main plant in Cologne. Automotive Manager, Markus Feth, says, "A plastic bushing is not always a pla-

stic bushing. In Cologne, we manufacture original "iglidur" polymer bearings, which allow our customers to save money and increase the service life of their applications. igus carries out more than 5,000 bearings tests year in, year out, in its own technical centre. 120 new material compounds are developed every year.

New: "iglidur H1"

for high temperatures and chemicals

igus has developed a new polymer material, "iglidur H1", for use in engine compartments. The new, long-life bearings are suitable for applications where long service life is required under extreme conditions. They are lubrication-free, wear-resistant and low-friction, even at



Picture PM2407-01: igus GmbH, Cologne

New polymer plain bearing "iglidur H1": lubrication-free and wear-resistant under high temperatures and despite humidity and chemicals.

igus - press release

high temperatures, and despite humidity or chemicals. They are also suitable as brake calliper bearings for trucks at 170 °C, for example, where they also have a vibration-damping effect and are resistant to media, such as brake fluid.

Conductive polymer bearings guarantee cathodic dip coating

As a cost-saving alternative to bushings made of metal or PTFE-coated bearings, igus presented additional plain bearings made from the polymer material "iglidur RN89" at the IAA. These are electrically conductive bearings, with possible applications in multiple-joint hinges, seat structures or in soft-top linkages. The bearings can be mounted with an overlap, thus slightly clamping to the rivet, before cathodic dip coating. This achieves a large contact area between bearing and bolt, so that coating of the complete component is guaranteed. The bearings also compensate for different tolerances.

Rattle-free and quiet

For use in pedals, igus presented the clearance-free, pre-stressed polymer plain bearing "iglidur JVFM Preload" for high static loads. The maintenance-free bearing with axial and radial tolerance compensation does not rattle or make any other noise.

New clip bearings for multiple-joint hinges

igus also presented new "iglidur" clip bearings at the IAA, which can simply be driven into punched or beaded sheet metal and have been developed for automated processes and large series. Special tools are not required when the bearings are used in seating or soft-top systems, or in multiple-joint hinges. They are undercut to prevent them falling out. In addition to the clip bearings, "iglidur" MKM double flange bearing with special slotted sections and polymer bearings with torsion resistance are also available.

New: Coupling rods – saving costs in the engine compartment

A further product innovation that igus presented at the IAA are "igubal" connecting rods. These one-piece connecting rods made of the polymer compound "igumid

G" can – in place of multi-piece metal/plastic versions – reduce costs by up to 90 percent, according to igus. They are corrosion and self-lubricating, thus maintenance-free and special sizes are available. The new connecting rods are used, for example, for gear shift mechanisms. They are also suitable for use in engine compartments thanks to their temperature application range of up to 200 °C.

Special sizes on request

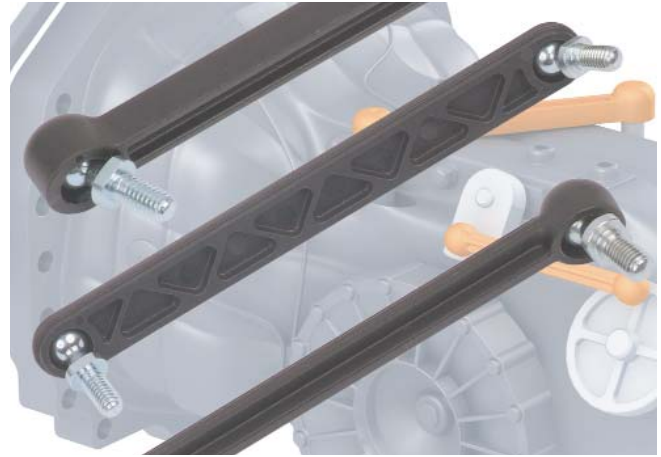
As an international developer of polymers and an injection moulding company with 42 years of experience, igus also manufactures special parts. Automotive Manager, Markus Feth, "From ant-torque devices to snap connections and tolerance compensation - a wide range of special designs are possible, tailored to individual customer requests." This, according to Feth, often also allows special functions to be achieved with just one component.

Polymer energy chains for sliding doors or seat adjustment

As a leading manufacturer of components made of special polymers, igus also supplies polymer energy chains to the automotive sector. One example is the new, universal energy chain "E4.1". Completely pre-harnessed, this chain guarantees the power supply to sliding doors in vans and SUVs, even when they are open. Further application areas include seat adjustment mechanisms. The energy chain is quick to install thanks to a pre-fitted quick lock mechanism, which can simply be pushed closed by hand.



Picture PM2407-02: igus GmbH, Cologne
The electrically conductive polymer bearing "iglidur RN89" guarantees the cathodic dip coating of the complete component.



Picture PM2407-05: igus GmbH, Cologne
New "igubal" connecting rod: corrosion- and lubrication-free, for gear shift mechanisms, for example.



Picture PM2407-03: igus GmbH, Cologne
Clearance-free, pre-stressed plain bearing "iglidur JVFM Preload" for no-noise use in pedals.



Picture PM2407-06: igus GmbH, Cologne
igus also manufactures special sizes or parts according to customer requests.



Picture PM2407-04: igus GmbH, Cologne
New clip bearing for multiple-joint hinges requires no tools.

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