

Energy chain solutions for fast rotational movements, from stock

Standard modular "RBR" systems for reliable circular motions, at up to 360 degrees per second

For several years igus has been developing customised systems for circular movements with energy chains, so-called 'rotating modules'. As a result, rotating assemblies can be supplied with energy, for example, on machine tools, robots up to bucket wheel excavators. In order to provide solutions for such applications even more quickly to customers, the motion plastics specialist has now developed a standard range of rotary modules and offers a complete installation-friendly kit system for fast rotating applications.

Some solutions that were originally developed as a solution for a specific customer requirement, often find their way into the igus standard range. In this way the motion plastics specialist often developed solutions that would be interesting for another customers too. "We often develop new products by working closely with customers in search of new solutions and by actively asking for the problems faced by users," explains Frank Schlögel, Head of Engineering Projects at igus. "This is the case with our RBR systems for circular motions."

Two-piece trough for quick rotations and low displacement forces

In the rotary modules, the energy chains are mounted on the side and use a "reverse bending radius" (RBR). This means that the chain links can be moved in both directions, unlike conventional linear travels. The cables and hoses are securely guided in the chain with locking separators. With 1,040 abrasion-resistant chainflex cables, igus also offers a complete range from stock to guarantee maximum service life for moving applications. For rotary modules with high speeds and many motion cycles a two-tiered guide channel is used. One part is fixed to the static point of the system, the other to the rotating point. In this way the fixed end of the energy chain can be freely selected. "We minimise the relative movements of the cables and the energy chain through the split guide trough," explains Frank Schlögel.

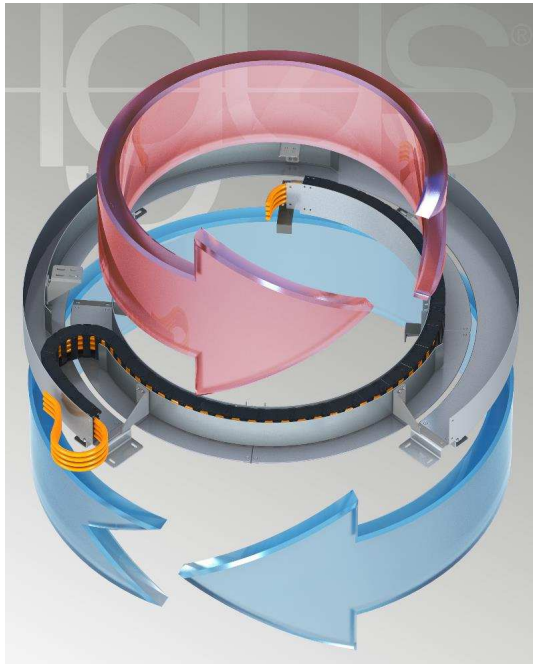
"As a result, we achieve better reliability and minimise the forces in the chain." For applications with lower speeds igus provides rotary modules with static guide troughs.

Flexible use of the design space

The standardised modules from the catalogue can be delivered within two weeks. In this way the lead time required for a special project is also eliminated. Depending on requirements, they can be supplied with optional mounting brackets or a cover. In systems with high lateral accelerations or systems that operate in a "tilted" position, the carried guide elements provide additional security and protection to the energy, data and media guidance. For environments with extreme dirt accumulation, for example in open cast mining, cement works or in coal terminals, the use of an enclosed trough is also possible. In this way, dirt which falls within the working range of the energy chain exits again and does not accumulate in the guide trough. And for applications with very small installation spaces, opposed energy chains can be used to save space.

Depending on the selected diameter, rotation angles from 420 to 600 degrees and rotation speeds up to 360 degrees per second are possible for the modules. Thanks to the flexibility and speed of the system, and the flexibility in the design, the modules are suitable for a variety of applications. From traditional mechanical and plant engineering through to high-tech applications in satellite antenna construction or in giant offshore applications, rotation angles up to 900 degrees can be implemented by combining multiple RBR systems. And if customer applications exceed the requirements of the standard range, igus is continuing to focus on customer-specific solutions in order to offer the best solutions for users.

Captions:



Picture PM5615-1

To supply energy, data and media in rotating assemblies, igus has developed a standard range with RBR modules and offers a complete modular kit system for fast rotating applications. (Source: igus GmbH)

PRESS CONTACT:

Oliver Cyrus
Head of Media and Advertising

igus® GmbH
Spicher Strasse 1a
51147 Cologne
Tel. 0 22 03 / 96 49-459
Fax +49 22 03 / 96 49-631
ocyrus@igus.de
www.igus.de/de/presse

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", "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.