

New energy supply system for rotary motion up to 7,000 degrees - lightweight and highly flexible

The twisterband HD is one of more than 100 innovations presented by igus at the 2015 Hannover Messe

Rotary motions in machinery can be tricky when managing cables and hoses. In order to protect and guide them safely, igus has expanded its range of energy chains for rotary motion with a "heavy duty" version of its twisterband. The new twisterband HD is an even stronger, compact, spiral-shaped energy chain for circular motion, with rotations of up to 20 rotations possible.

igus has developed the twisterband HD for guiding energy, data and media cables to give operational and functional reliability in rotary motions with high loads. It combines the design features and qualities of the proven twisterchain, a circular energy chain for rotary motion up to a maximum of 360 degrees, with its twisterband, the winner of the Red Dot Design Award. The new twisterband HD combines the strength and stability of the chain with the compactness, flexibility and the rotation angle of the band and therefore fills a gap between the two igus products.

To deliver the "Heavy Duty" (HD) in the new "twisterband HD", the designers at igus have reinforced the band segments significantly and constructed it for more strength and stability. On the other hand, a hinge was developed for the connection of the individual segments, so that the twisterband HD withstands extreme loads with exceptional flexibility and rotational mobility (up to 20 times around its own axis). By using this design to connect the elements, the individual parts can be injection-moulded from the standard igus material for e-chains. The twisterband HD is optimised for temperatures below 0°C and therefore suitable for outdoor use.

Compact design for cable protection in the smallest installation spaces

The twisterband HD guarantees high strength with minimal installation space requirements. The outer diameter of this product is just 300mm, the height starts at 250mm and varies according to the required rotation angle upward. Due to the innovative design, high angles of rotation are possible: horizontally to around 7,000 degrees and vertically to around 3,000 degrees. The design principle also open up the potential for larger versions. But despite this rotational capability, the cables are always well protected. Combined tests with chainflex cables in the igus' in-house lab arrived at a service life of one million rotary cycles and more. The predefined minimum bending radius contributes towards this, preventing damage to cables. The special hinge design enables a fast filling from the outside. Together with the tribo-optimised high-performance plastic of the band, a long service life is ensured even under difficult ambient conditions such as temperatures from -40°C to +80°C. Technically advanced, yet inexpensive, the twisterband HD is the ideal, low wear and low maintenance solution for carrying cables in rotary applications, encased in a compact and tough guiding system.

Captions:



Picture PM0815-1

At the Hannover Messe, igus presents the new twisterband HD for rotation in very confined spaces with very high load capacity. (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 2,400 people around the world. In 2013, igus generated a turnover of 427 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.