Modular, flat and quickly assembled: e-skin flat single pods for cleanrooms

igus extends ISO Class 1 energy chain series with single chamber solution and e-skin flat with support chain for more unsupported lengths

igus has developed the e-skin flat to guide cables compactly and virtually particle-free in cleanrooms. In order to enable the users to install the energy chain even faster and exchange cables easily, igus now also offers the e-skin flat as "single pods". This allows the user to define the number of chambers, combine them modularly and insert cables in seconds. A new support chain additionally strengthens the e-skin flat and provides a higher unsupported length.

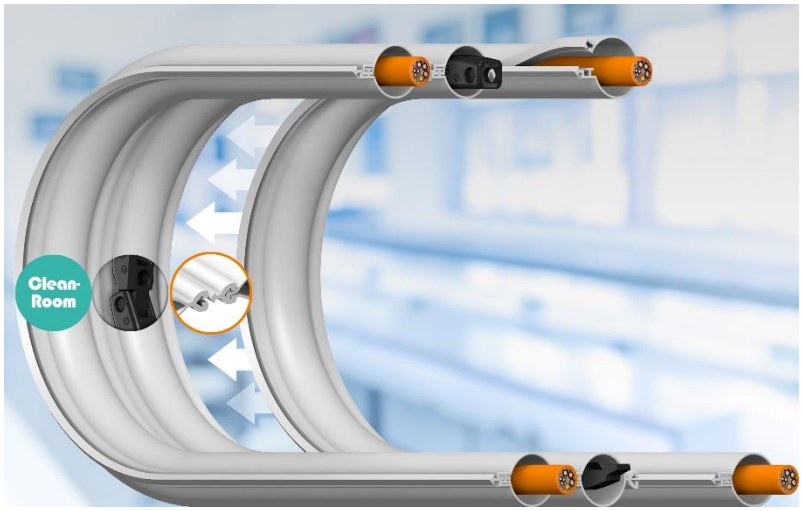
The advancing electrification from the electric car to the Smart Watch is currently causing strong growth in the semiconductor industry. For the industry, this means a high investment in the development and production of electronic components, semiconductors, OLED and LCD displays in cleanrooms. For this reason, machine elements such as cables and energy supply systems that meet the strict particle-free requirements are also in demand. igus has developed the e-skin flat especially for cable guidance in compact installation spaces in cleanrooms. "We presented the extremely flat energy supply system for the first time at the Hannover Messe 2019, and since then the demand has been very high", explains Peter Mattonet, Industry Manager Cleanroom Technology at igus GmbH. The use of similar energy supply solutions or clean cable solutions had the big disadvantage that, in the case of a cable failure, the complete energy supply system had to be replaced. With the e-skin flat, igus now offers an easy-to-maintain solution as a single pod option. The user can now define the number of chambers, connect them together, extend them at any time, cut them to the desired length and insert the cables. Alternatively, igus also offers a direct ready-to-connect system with specially developed cleanroom cables. The e-skin flat single pods are available in two dimensions as closed and open versions.

In the closed version, the cables can simply be guided through the chamber openings, while in the open version the cables are inserted from the side and closed by means of a zip fastener. "The main advantage of the e-skin flat single pods is the easy maintenance, because unlike alternative solutions, the cables are not shrink-wrapped. With the chamber design, the cables can be easily pulled in again. The concept convinces customers", says Peter Mattonet.

The e-skin flat with support chain as "backbone"

To increase the stability of the e-skin flat single pods, igus now also offers an e-skin flat with support chain for the closed version. It enables a higher unsupported length of the single pods. This ensures strong operation and compliance with the defined bend radius of 40mm to 100mm. The integrated chain consists of a highly wear-resistant igus polymer, which is matched to the material of the e-skin flat and does not damage the chamber thanks to rounded edges. All cleanroom solutions are tested by igus in its new cleanroom laboratory, which the Fraunhofer Institute IPA built for the motion plastics specialist in Cologne. Here, all products are tested in a cleanroom up to air purity class 1 according to ISO 14644-1.

Caption:



Picture PM4120-1

With the e-skin flat single pods, the user can now define the number of chambers, connect them together and expand them at any time. The e-skin flat with support chain provides more unsupported lengths. (Source: igus GmbH)

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ABOUT IGUS:

igus GmbH develops and produces motion plastics. These lubrication-free, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings as well as lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 35 countries and employs 3,800 people across the globe. In 2019, igus generated a turnover of €764 million. Research in the industry's largest test laboratories constantly yields innovations and more security for users. 234,000 articles are available from stock and the service life can be calculated online. In recent years, the company has expanded by creating internal startups, e.g. for ball bearings, robot drives, 3D printing, the RBTX platform for Lean Robotics and intelligent "smart plastics" for Industry 4.0. Among the most important environmental investments are the "chainge" programme – recycling of used e-chains - and the participation in an enterprise that produces oil from plastic waste. (Plastic2Oil).