

# Whisper quiet, modular cleanroom solutions from igus for the smallest of installation spaces

The world's first e-skin soft and e-skin flat ensure particle-free cable routing in compact and flat installation spaces

For guiding cables securely and abrasion-free in cleanrooms, igus has e-skin in its product range. The energy chain for cleanroom applications has now been equipped with a softer material especially for compact installation spaces. The safe and particle-free guidance of cables can be undertaken at a low clearance height with the new e-skin soft. For very tight installation spaces, igus has also developed the e-skin flat. The new low-profile energy supply has a chamber design and is easy to fill and maintain. Both energy chains were convincing in the sound test with their very quiet operation.

In the production of microchips, OLEDs, LCDs, implants, and semiconductors or in the pharmaceutical industry, there are very high demands in a pure manufacturing environment. Because every type of contamination has a direct effect on the product and can lead to serious damage for the manufacturer. Therefore, the conditions on the used machine elements as well as on energy supply systems are particularly high. As a result, igus presented the easily openable e-skin, an enclosed corrugated tube, four years ago. It has the seal of approval Fraunhofer Tested Device of the ISO class 1 and in 2018 received the 2nd prize of the Fraunhofer clean technology award "Clean! 2018". The reasons for this approval were: the e-skin is made of tribologically optimised, abrasionresistant plastic, has a modular structure, and can be filled quickly. To make the e-skin suitable for use in compact rooms, it has now been fitted with a new soft material. The new e-skin soft can also be used in small installation spaces on short unsupported lengths. For very flat installation spaces, igus offers a new solution with a chamber design: the e-skin flat. Both energy chains were convincing in the noise test in the movement. The e-skin soft had a value of 32.4 dBA and the e-skin flat, 29 dBA. This means that the new energy supply

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systems for cleanrooms are significantly quieter than alternative solutions on the market.

# e-skin soft: modular and fast to fill

The new e-skin soft is based entirely on the modular principle of the proven e-skin. The separable upper and lower shells of the energy chain can be easily put together by a "zipper" to a fully enclosed tube, which is highly dustproof and water-resistant. This guarantees both cleanroom compatibility, quick filling and maintenance of the cables.

# Safe energy supply for flat installation spaces in cleanrooms

igus has now developed the e-skin flat especially for very tight installation spaces, for example in semiconductor manufacturing. The new energy supply consists of a profile with three cable chambers, which are extruded from high-performance plastics. Therefore, it is very flat and allows a very small bend radius and a low clearance height. The profiles can be connected to wider systems. In contrast to alternative solutions, the cables in the e-skin flat are not shrink-wrapped but are inserted into the chambers. In the event of a need for maintenance, the cables can simply be pulled in without having to install a new energy supply system. The user reduces the costs and improves his technology. In a second expansion stage, the individual chambers are openable from the outside thanks to a zipper system, so that maintenance can be speeded up further. Another advantage: with the new energy supply systems, e-skin flat and e-skin soft, igus offers two cost-effective solutions available directly from stock.

# Immediate ready-to-connect system with guaranteed service life

Upon request, the customer can receive the new energy chains for the cleanroom immediately as a ready-to-connect complete system with chainflex cables. The user has the option to use more than 918 highly flexible cables with IPA class 1, which are specifically developed for use in the energy chain. All cables were tested under real conditions in the company's own 3,800 square metre laboratory. This makes igus the only provider in the world to offer a 36-month guarantee on its range of cables.



# Caption:



# Picture PM2819-1

With the e-skin flat and the e-skin soft, igus offers two new space-saving energy supply systems for the cleanroom. The modular energy chains operate quietly and are easy to fill. In a second expansion stage of the e-skin flat, the individual chambers are openable thanks to the zipper system. (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 4,150 people around the world. In 2018, igus generated a turnover of 748 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", "Apiro", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain-systems", "e-ketten", "e-kettensysteme", "e-skin", "flizz", "igear", "iglidur", "igubal", "kineKIT", "manus", "motion plastics", "pikchain", "plastics for longer life", "readychain", "readycable", "ReBeL", "speedigus", "triflex", "robolink", and "xiros" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.