

Theme

Hygienic Design

Industry

Food and beverage industry

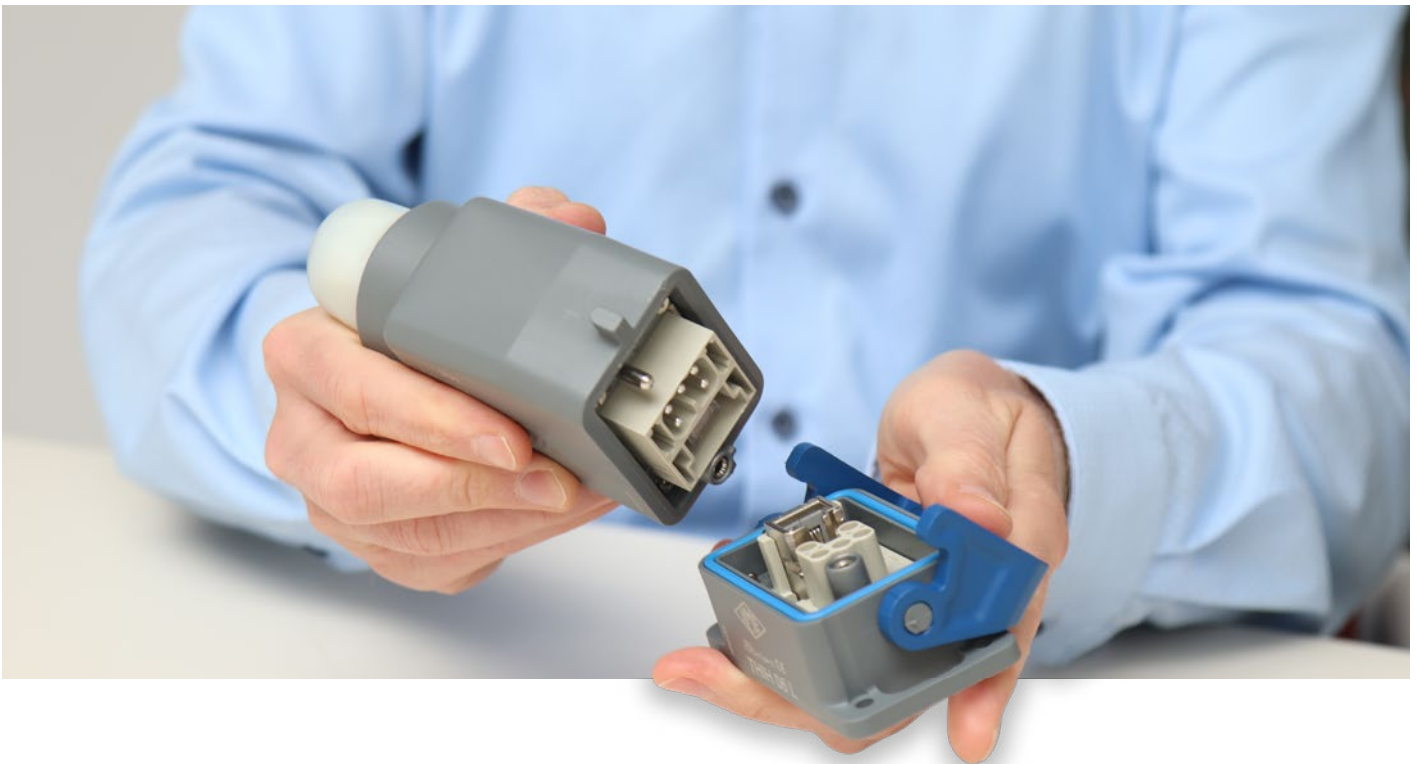


Connector specialist ILME plays it safe when it comes to cable entries

Spotless symbiosis

In many cases, stainless steel is still the premium material in food and process engineering when it comes to Hygienic Design. However, plastics with similarly good properties are now displacing this expensive solution, as ILME's current connector family demonstrates:

these connectors benefit from considerable price and weight advantages and are equipped with a special cable entry – one that has been fully developed in line with EHEDG principles.



From the point of view of Hygienic Design and in view of the necessity to clean them, production plants in the food and chemical industries should as far as possible do without connectors. "But that's totally unrealistic in practice, because there are always modules of a plant that need to be replaced at some point," says Dirk Offermann, Product Manager at ILME. In order to achieve a high level of product safety despite this, components are needed that also offer maximum process reliability. **"So we developed the T-TYPE HYGIENIC rectangular connectors specifically for the food industry."**

ILME, with its headquarters in Milan and subsidiaries in Germany, France, Great Britain and Scandinavia, as well as China, Japan and South Korea, is one of the leading European manufacturers of industrial connectors and produces solutions for a very wide range of industries, including mechanical engineering, automotives, materials handling, automation, rail, wind and, of course, the food and beverage sector.



"The task of selecting the right components for use in the food and beverage industry is subject to the strictest safety regulations designed to prevent food contamination during production," explains Patrick Rieckhoff, Chief Technical Officer at ILME's German subsidiary in Wiehl near Cologne. "The cleanability and resistance of materials to alkaline or acidic cleaning agents or disinfectants are among the most important properties required." This is why the components used in these plants should meet the requirements laid down in, for example, EHEDG Guideline No. 32, HACCP, and FDA CFR 177.2600 and CFR 177.1520.

To meet the strict hygiene requirements, ILME has "flattened" the connector enclosure and modified the closing mechanism to achieve a design that is as crevice-free as possible. (Photo: Lutz)



The T-TYPE hygienic connector is available in 4 sizes and can be combined and customised with more than 80 different MIXO contact inserts. (Photo: ILME)

New development – customisable with over 80 MIXO series modular inserts

"We addressed this when developing our current T-TYPE HYGIENIC series and brought our expertise in the production of thermoplastic enclosures to bear," Rieckhoff explains.

The connectors are compatible with standard metal enclosures, but designed for F+B splash zones in accordance with FDA 21 and EHEDG 32. They are available in four common sizes with protection rating IP 65, IP 66 or IP 69. **"In combination with our MIXO modular contact inserts, more than 80 different modules with contacts for power, signals, data transmission and pneumatics are available. Even RJ45 connectors can be combined."**

A lot of know-how has gone into the design of the connector enclosure alone: "We have consistently reduced the crevice dimensions to almost zero to ensure their cleanability. The closing levers were also modified accordingly, without sacrificing robustness or closing reliability." Even the relief of the ILME logo was smoothed and "flattened" to achieve the smoothest possible surface. And parts at risk of being lost have been given a special colour and made with metallic particles so they can be easily seen and recovered.



The EHEDG-certified blueglobe CLEAN Plus made of polyamide **gives dirt and bacteria no chance to adhere and build up** thanks to the **very smooth plastic surfaces and the rounded contours** of the spanner flats. (Photo: PFLITSCH)

Impressed by the EHEDG-certified cable entry

Another challenge in Hygienic Design is the perfect cable entry. Here, ILME trusts in the technological expertise and edge of PFLITSCH from Hückeswagen, Germany.

This medium-sized company is also committed to providing the best solutions for demanding industries and has launched its **"blueglobe CLEAN Plus", the first cable gland to be fully EHEDG-certified. In addition to the stainless steel version, a plastic variant with equally good product properties has also been available for some time – but at a much lower price.**

"And we've been highly impressed by it," says Dirk Offermann. And this elegant component produces flush transitions between the cable and the connector enclosure.

"The CLEAN Plus cable gland is one of the few components that we buy in", explains Offermann, referring to ILME's 95%+ vertical integration that gives the company maximum independence from supply chains. "In recent times, this has proven to be particularly effective, because we have been able to deliver to our clients the entire time." ILME's experts are so

"The combination of our plastic connector and PFLITSCH's plastic cable gland makes the overall solution significantly cheaper and lighter in weight."

Patrick Rieckhoff
CTO
ILME Germany

impressed with PFLITSCH's solution that they have even included the blueglobe CLEAN Plus in their own catalogue. "We make no secret of it when we offer top-quality components made by other companies in addition to our own."



Spotless symbiosis – Patrick Rieckhoff and Dirk Offermann (ILME) and Heiko Emde (PFLITSCH) are certain: "In food production, rigorous Hygienic Design must become the standard." (Photo: Lutz)

Significantly lower price – less weight

"In order to meet the EHEDG's stringent specifications, we broke new ground with our blueglobe CLEAN Plus and then succeeded in having it certified as the first all-in-one cable gland," explains Heiko Emde, Market Segment Manager Food and Pharma – Hygienic Design at PFLITSCH. The gland body is optionally made of the high-quality stainless steel 1.4404/AISI 316L or – as for ILME – of food-grade, FDA-compliant plastic. The cable gland boasts a significantly lower price as well as reduced weight. This variant is currently available in sizes from M16 to M32 for cable diameters from 7.0 mm to 23.0 mm.

Very smooth surfaces with a roughness of $Ra < 0.8 \mu m$ and rounded contours on the spanner flats ensure better cleaning efficiency. For the sealing inserts and grommets, PFLITSCH uses plastics that comply with FDA 21 CFR § 177.2600 and are suitable for contact with foodstuffs in accordance with EU Regulation 10/2011. Technical

features include compliance with the exacting protection ratings IP 66, IP 68 (at 15 bar) and IP 69, a large sealing insert that provides exemplary cable protection and the better-than-average strain relief that prevents the cable from slipping out of the cable gland, such as can happen if a connector is disconnected by tugging the cable instead of pulling out the connector.

"We fully trust in the expertise of PFLITSCH when it comes to hygienic cable entries."

Dirk Offermann
Area und Product Manager
ILME Germany

Hygienic Design plus aesthetics

"Compared with other hygienic cable glands, our solution is very compact, which also benefits the design," notes Emde. Smooth, gently curved and crevice-free surfaces accentuate the product both visually and haptically. Thanks to these features, the blueglobe CLEAN Plus received the iF Award for good product design. "This also fits in very well with our demands for a coherent product design," says Dirk Offermann emphasizing the decision in favour of the PFLITSCH product.

"Compared with other hygienic cable glands, our solution is very compact, which also benefits the design."

Heiko Emde

Market Segment Manager Food and Pharma
PFLITSCH Hygienic Design

Your advantages at a glance



PFLITSCH blueglobe CLEAN Plus

- » Food grade – suitable for all areas of the food and pharmaceutical industries
- » Installation without gaps – flat and free from cavities where dirt could
- » Dirt and bacteria don't stand a chance
- » stainless steel types AISI 303 and 316L resistant to corrosion
- » No special tools required for assembly – quick, simple and therefore cost-efficient
- » Very easy to clean – smooth surfaces with $Ra < 0.8 \mu m$ and rounded spanner flats
- » Hard-wearing – resistant to all common cleaning agents as well as high-pressure cleaning
- » Lower operating costs for your production plant

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