HYGIENIC DESIGN

Seamless safety

Clean processes from the get-go

PFLITSCH GUARD
A CLEAN PRODUCTION BY ALL MEANS



PFLITSCH
Passion for the best solution

When hygiene is top priority
Hygienic Design for total safety in food production

Hygienic conditions in food production and the pharmaceutical industry are increasingly being seen as crucial and essential by plant operators, plant manufacturers and consumers alike. Even the very slightest of impurities can impair the **quality of the product** and endanger people's health, which is why **ever greater demands are being made in respect of the safety** of the design and production process of production facilities. A key role in this is played by "Hygienic Design".

Standards for greater food safety

The benchmark for Hygienic Design are the guidelines of the European Hygienic Engineering & Design Group (EHEDG), an institution made up of plant manufacturers, food producers, legislators and experts.

The EHEDG has made it its business to improve food safety by defining essential standards and disseminating the requisite know-how. As a member of the EHEDG, we are actively involved in the various technical committees and are contributing **our many years of expertise** to promote and generate a broad awareness of the issue of Hygienic Design.

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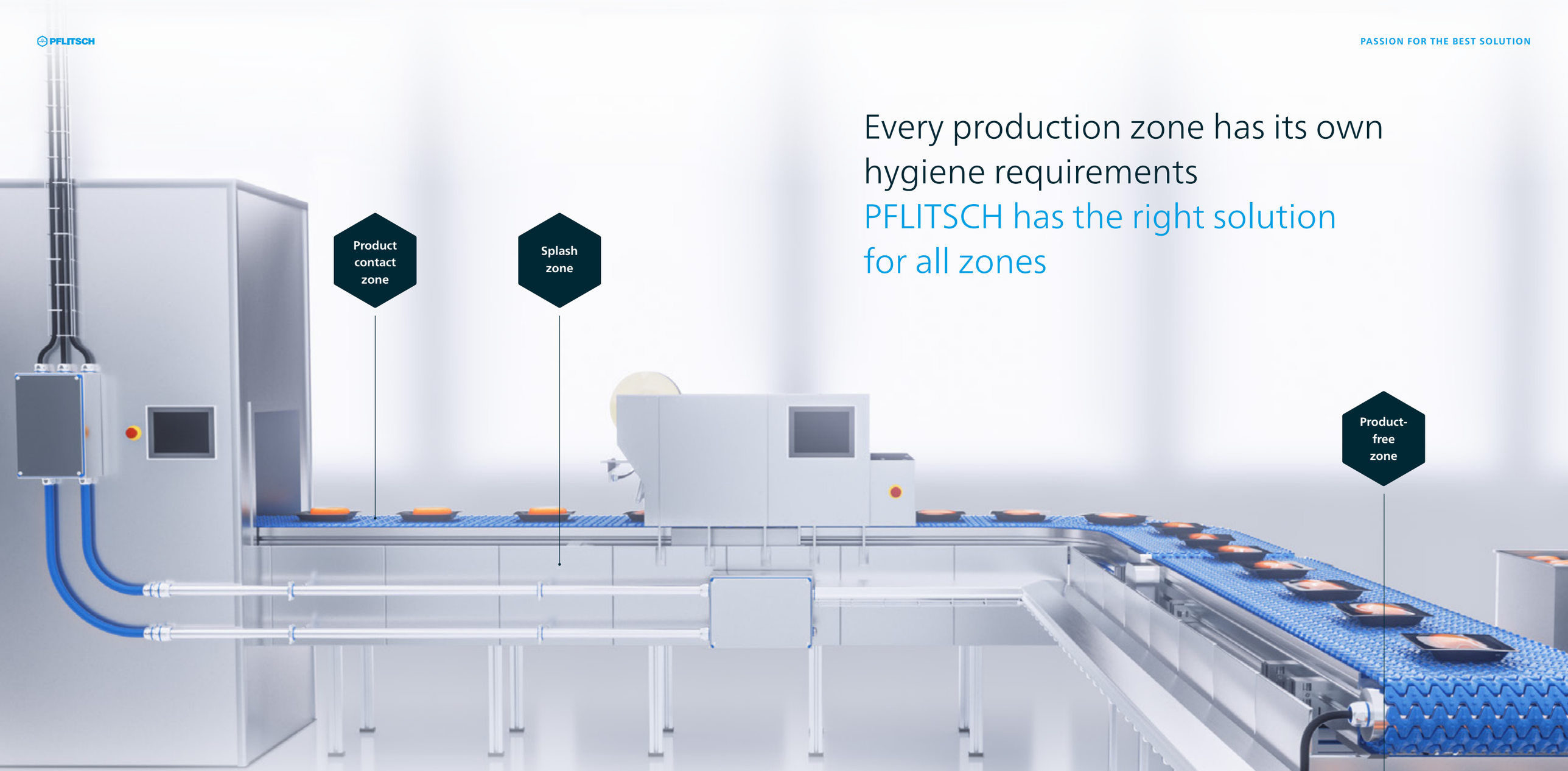
Every production zone has its own hygiene requirements

PFLITSCH has the right solution for all zones



Product contact zone

In this zone, food can come into contact with parts of the plant and then return to the manufacturing process. For this reason, the hygiene requirements are exceedingly high and the components installed here must not aid the formation of potential dirt traps. It is precisely such zones that led PFLITSCH to design its product solutions in accordance with the Hygienic Design guidelines of the EHEDG.

Splash zone

Production plant components can come into contact with food in what is called the “splash zone”. The focus here is on the ease with which these components can be cleaned and made hygienic. To prevent splashes of food from building up, the components must be protected or have smooth surfaces. The goal is to enable residue-free cleaning of the relevant sections of the production machinery, so that bacterial nests cannot form here either.

Product-free zone

In this zone, the products are as a rule already packed and food no longer comes into contact with plant components. The requirements are comparable to those in a classic industrial environment.



Meeting tomorrow's requirements today

With PFLITSCH's comprehensive solutions

By coming up with innovative solutions for cable entry, cable routing and cable protection, PFLITSCH has developed into an expert in cable management. As a pioneer in the field of Hygienic Design, we pursue a holistic approach. The result is a **smart system of coordinated solutions** designed to meet all the demands of hygienic cable management – and all from a single source.

This system ensures that you are always on the safe side, with reliable production processes. It also enables you to meet the coming challenges in respect of hygiene and to **maintain the highest standards** so that you can be competitive over the long run.

Cable gland

PFLITSCH has developed cable glands for feeding cables into control cabinets and machines that meet the strictest hygiene requirements and at the same time impress with tight seals and their ease of assembly.

Cable routing

The innovative cable trunking systems from PFLITSCH make it simpler to run cables efficiently and safely. Designed specifically for demanding hygiene applications, this stainless-steel wire-tray trunking is a rugged, open routing system.

Cable protection

Cables are exposed not only to mechanical stresses and extreme temperatures, but also to aggressive chemicals and cleaning agents. The hygienically compliant cable protection products from PFLITSCH offer the right solutions to counter these potentially damaging factors.



blueglobe CLEAN Plus
Dirt doesn't stand a chance: the blueglobe CLEAN Plus can be installed flat without gaps and is easy to clean.

Hygienic cable routing made simple
With PFLITSCH
Hygienic Design cable glands

What you require

» Hygienic cable entry solutions for seamless production reliability as well as efficient and reproducible manufacturing processes in the food and pharmaceutical industries

» Solutions for all production zones – including direct contact with food or pharmaceutical products

» Suitable for fully automated cleaning, an aspect that is growing in importance as the level of automation expands

» Long-term planning security through solutions that will also fulfil future, stricter hygiene rules

» In addition to the hygiene requirements, additional, highly developed and specific properties such as heat resistance, electromagnetic compatibility and explosion protection

» Safer and more cost-effective installation process

Our product solutions

» The blueglobe CLEAN Plus for high process reliability to avoid production outages, contamination and product recalls

» FDA- and Hygienic Design-compliant and EHEDG-certified cable gland for unrestricted use in food and pharmaceutical production lines

» Avoidance of biological and chemical contamination plus easy cleaning thanks to
› smooth surfaces
› rounded spanner flats on the pressure screw
› no cavities, gaps or external threads

» Reliable and safe cleaning (even using a high-pressure cleaner) thanks to great tightness of seal and good resistance to corrosion, cleaning agents and aggressive chemicals

» Ideally suited to fully automated cleaning processes

» Highly developed hygiene properties that meet the requirements of tomorrow today

» blueglobe CLEAN Plus variants for more advanced, individual requirements such as temperature resistance, EMC shielding and explosion protection

» Quick, easy assembly that saves time and costs

blueglobe CLEAN Plus

A solution for universal use in applications that demand the highest standards of hygiene and sterility.

Gland body	AISI 316L/1.4404 and AISI 303/1.4305 stainless steel
Sealing insert	TPU
Temperature range	–40 °C/+85 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M8x1.0 to M40x1.5
Sealing range max./min.	29.0 mm to 4.0 mm

blueglobe CLEAN Plus product portfolio



blueglobe CLEAN Plus HTS

Suitable for use in hygienic and sterile environments with extreme temperature conditions.

Gland body	AISI 316L and AISI 303 stainless steel
Sealing insert	Silicone
Temperature range	–55 °C/+180 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M8x1.0 to M63x1.5
Sealing range max./min.	55.0 mm to 4.0 mm



blueglobe TRI CLEAN Plus

Compliance with strict hygiene requirements and at the same time reliable protection against electromagnetic interference.

Gland body	AISI 316L and AISI 303 stainless steel
Sealing insert	TPU
Temperature range	–40 °C/+85 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M12x1.5 to M40x1.5
Sealing range max./min.	29.0 mm to 5.0 mm



blueglobe CLEAN Plus Polyamid

An attractive cost-benefit ratio com-bined with universal use in demanding hygienic and sterile environments, longer cleaning intervals and less aggressive cleaning agents. Also available as a high-temperature polyamide HTS version.

Gland body	PA 6 – FDA
Sealing insert	TPU
Temperature range	PA –20 °C/+85 °C PA HTS –20 °C/+110 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M16x1.5 to M32x1.5
Sealing range max./min.	23.0 mm to 7.0 mm



blueglobe CLEAN Plus Ex-e

Suitable solution for use in environments that require the highest standards of hygiene and are also potentially explosive. Certified according to the current ATEX Directive for application areas G/D for equipment class II and explosion protection types e and d.

Gland body	AISI 316L and AISI 303 stainless steel
Sealing insert	TPU
Temperature range	–20 °C/+60 °C
Type of protection	IP 66, IP 68 up to 15 bar
Connection thread	M10x1.0 to M63x1.5
Sealing range max./min.	29.0 mm to 5.0 mm



blueglobe CLEAN Plus hygienic elbow

And EHEDG-compliant solution for rou-ting cables out of control cabinets or machines at a right angle. The elbow fitting can be turned through 360° to route the cables in any direction. Also available as an EMC variant.

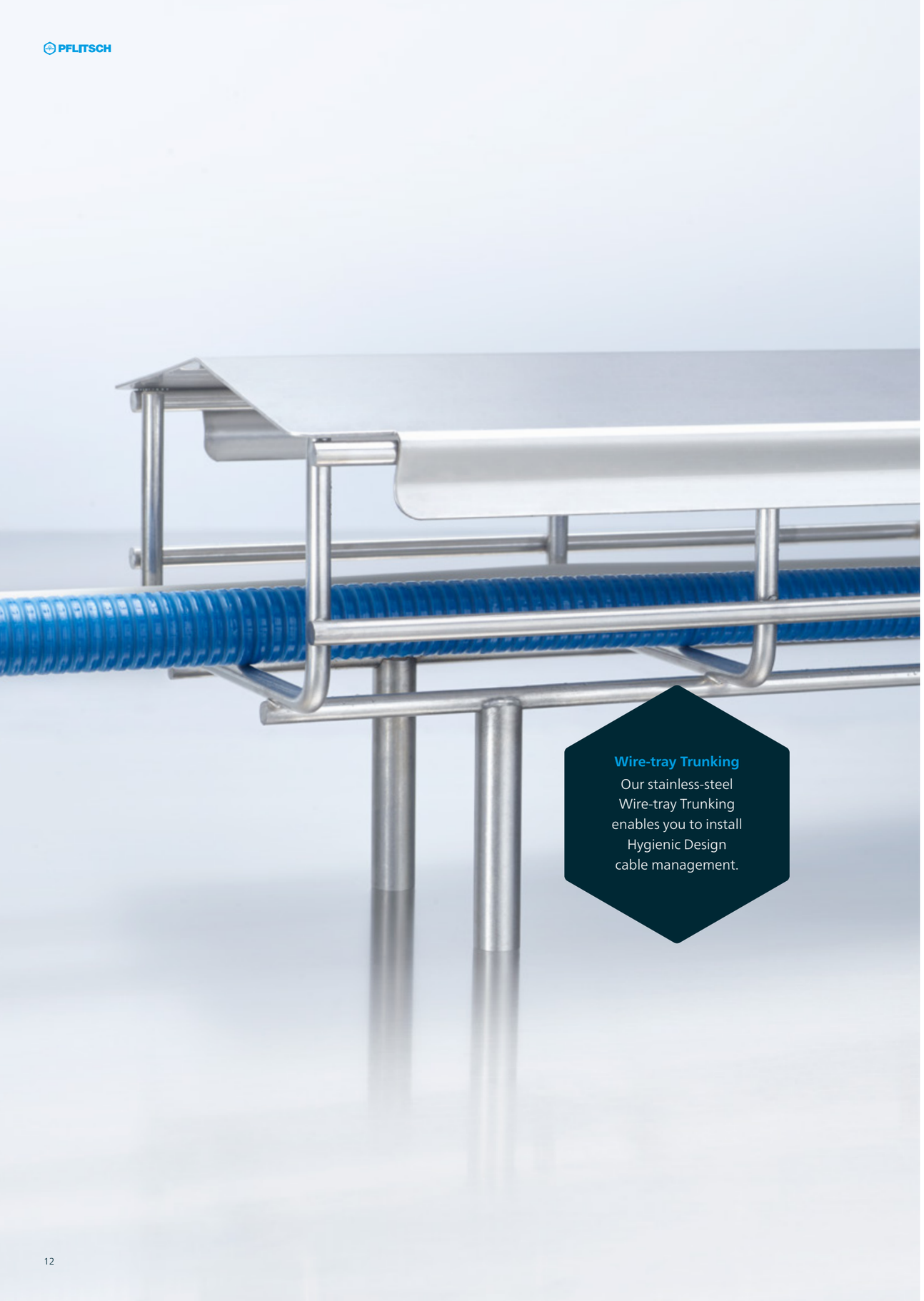
Gland body	AISI 316L stainless steel
Sealing insert	Silicone
Temperature range	–55 °C/+180 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M10x1.0 to M32x1.5
Sealing range max./min.	18.0 mm to 4.0 mm



CLEAN Plus blind plug

Unused holes in machines and control cabinets must be hermetically sealed.

Gland body	AISI 316L stainless steel
Sealing insert	TPU
Temperature range	–40 °C/+85 °C
Type of protection	IP 68 up to 15 bar, IP 69
Connection thread	M12x1.5 to M63x1.5



Wire-tray Trunking
Our stainless-steel Wire-tray Trunking enables you to install Hygienic Design cable management.

Run cables perfectly hygienically
PFLITSCH's open Wire-tray Trunking makes it possible

What you require

- A hygienic cable routing system for high production reliability in the food and pharmaceutical industries
- Good cleanability
- High corrosion resistance
- Resistance to common cleaning agents and aggressive chemicals
- Customised routing of large cable volumes over long distances
- Clear routing and easy access to the cable installation
- Additional cable protection
- Ease of installation

Our product solutions

- PFLITSCH Wire-tray Trunking – the open cable routing system designed for the strict hygiene requirements of the food and pharmaceutical industries
- Good cleanability and ventilation due to the open design
- High resistance to corrosion, all common cleaning agents and aggressive chemicals
- Sturdy, stainless-steel system for safely and reliably running large numbers of cables over long distances
- Simple pre-assembly and installation using few tools and connectors for customised routing designs
- Extensive range of fastenings for safe and reliable installation – horizontally and vertically
- Clear cable routing thanks to the open design and clip-in separators
- Roof-shaped covers to protect the cables from liquids dripping from above
- Outstanding efficiency due to
  - time- and cost-saving installation using just two tools and two connectors
  - Robust design that requires only a few support points

Wire-tray Trunking

A hygienic cable management system that allows permanent access to the cables routed in it and is also easy to clean.

Material	AISI 303/1.4305 and AISI 316L/1.4404 stainless steel
Sealing insert	TPE/silicone
Sizes	40 mm to 620 mm wide 20 mm to 120 mm high
Variants	Flat (F), U-, C-, G- and Z-shaped

Wire-tray Trunking product portfolio



Wire-tray Trunking, Z-shaped

When cables are installed vertically, they can fall out of the standard version of Wire-tray Trunking if they aren't fastened to the trunking. This can be prevented by using our Z-shaped trunking that holds the cables in place thanks to its special design.

Material	AISI 303 and AISI 316L stainless steel
Dimensions	53 mm to 120 mm wide 53 mm to 120 mm high



Wire-tray Trunking with Tray Separators

To route cables in Wire-tray Trunking in a transparent way, you want to keep the various cable types hygienically separated from one another.

Material	Stainless steel
Dimensions	420 mm x 110 mm Partitioning: 90 mm/100 mm/90 mm



Wire-tray Trunking, asymmetric

It's not always possible to prevent liquids from dripping during production. To make sure that they can flow away or drip safely from the cable trunking, we need a good solution – ideally with a cover – that is easy to clean.

Material	Stainless steel
Dimensions	75x60/95 120x75/110



Wire-tray Trunking Cover

The cables in your production plant require reliable protection against mechanical impacts. At the same time, liquids that drip from above must drain away safely. This is where the Wire-tray Trunking cover is the ideal solution: the cover acts as a roof that covers the entire width of the trunking and reliably drains away any liquids that drip onto it.

Material	AISI 303 and AISI 316L stainless steel
Dimensions	53 mm to 620 mm wide
Versions	Roof-type and full protection



Additional Wire-tray Trunking floor – clippable

You want to use the space available in your Wire-tray Trunking as space-savingly as possible but also separate your cables according to e.g. power and data. But your cables still need to be well ventilated. This problem can easily be solved by using shelves – that can also be clipped in for added stability.

Material	Edelstahl
Dimensions	120 mm to 620 mm wide



Single Wire System

When running single cables, installing a separate length of cable trunking for each cable is excessive and wasteful. The perfect option in such cases is the Single Wire System with its open and hygienic design.

Material	AISI 316L stainless steel
Dimensions	8 mm to 16 mm (inside dimension of guide rings)

Hygienic corrugated conduit

Thanks to special sheathing, the conduit is predestined for use in the food industry since dirt and residues of liquids cannot settle and build up on its smooth surface.

For all-round cable protection

Sophisticated, hygienic cable-protection solutions from PFLITSCH

What you require

- Safe and efficient cable routing in conjunction with reliable cable protection
- Resistance to cleaning agents, oils and chemical liquids
- Cable-protection solutions to hygienically run several cables bundled together
- Cables routed through confined spaces between machines must be protected against mechanical damage
- Maintain the flexibility of the cables

Our product solutions

- PFLITSCH corrugated conduit – the FDA-compliant, Hygienic Design solution made of polyamide
- Resistant to cleaning agents, oils and chemical liquids
- Time- and cost-saving cleaning for great efficiency and sustainability
- Ideal for bundling together several cables in a hygienic way
- High mechanical resilience combined with great flexibility
- Ideal for space-saving cable routing in plants
- Resistance to high temperatures, briefly up to +120 °C
- Can also be combined with the blueglobe CLEAN Plus cable gland

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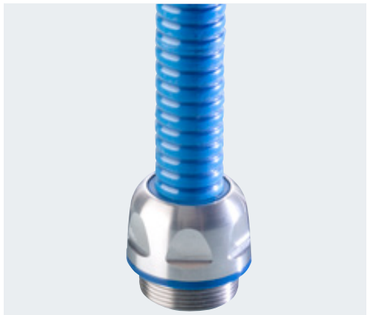
Product portfolio for hoses

Hygienic cable protection is possible thanks to PFLITSCH – the blueglobe CLEAN Plus can be combined with on the market available food- and FDA-compliant hoses (see product image on the right).



Sheathed corrugated conduit, flexible

Cable protection that impresses with high mechanical resistance and outstanding flexibility. The perfect solution for feeding multiple bundled cables into a housing or control cabinet – hygienically.

Hose material	FDA-compliant coated polyamide
Temperature range	–20 °C to +95 °C (briefly up to+120 °C)
Wall thickness	2.1 mm to 3.9 mm
Inner diameter	11.8 mm to 46.7 mm

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