

Stainless Steel Engineering®

ATT [www.att.eu](http://www.att.eu) is a Polish manufacturer specialising in stainless steel engineering. The company provides products and services for investment projects in various sectors – from the public, wastewater treatment, hospitality, chemistry and pharmaceuticals sectors to food and beverage. This last sector, **food and beverage**, is the one that ATT is the most focused on, and the one that is the driving force that sets the direction for the company's technological development.



ATT's core product group is drainage systems. Drains were the first products successfully developed in **2002 when the company was established**. Since then, we have managed to significantly extend our product portfolio, the most significant ones being: **manhole covers, protective elements (such as kerbs and bollards), platforms and support structures, expansion joints, stuffing trolleys/eurobins, and food processing trolleys**. Thanks to our engineering and

installation team, we are also able to handle the most advanced and customised **construction structures**. We can certainly say that ATT delivers its products and services to a **global market**. We even reach remote areas of the world like Australia, South Africa and Latin America. But our home and our strongest market is definitely Europe.

From the very beginning, ATT has been involved in the food and beverage processing industry. Most of our efforts are therefore aimed at hygienic design and quality requirements, understood as a product's functionality and durability. The hygiene concept, termed H.Design by us, involves every single department that is engaged in the production process in our Krakow facilities. This means purchasing, technology, engineering, production, quality control and logistics. All these **teams are trained and aware of the factors that influence**

**the hygiene features of the product.** In sharing our best hygienic design practices, we should briefly mention **drainage systems that create a buffer between the 'clean' and 'dirty' zones**. Installation of drainage products with low hygienic standards may result in harmful substances (present in the sewage system) penetrating to the clean/high-care zones and contaminating the

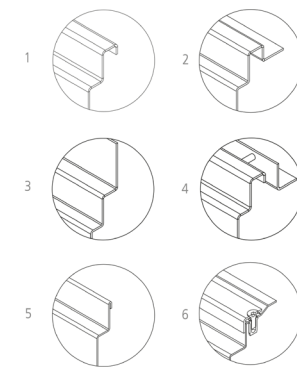


production area. Before selecting a drainage system, technology managers in F&B plants should take into account the following elements.

- materials and hygiene of the drains' production environment;
- types of elements and compatibility with floor technology;
- hygienic design features;
- flow rates of liquids;
- load class.

Let's briefly focus on the most important features of hygienic design.

- 1 – with downward flange
- 2 – with flange
- 3 – with raised back edge
- 4 – with expansion joint
- 5 – with tightly folded edge
- 6 – for vinyl floor



**Adapting the drainage to the type of floor** is a very important technical issue as point of contact between manufacturers of the drainage systems and industrial floor applications contractors. The selection of appropriate edge finishing of the products to enable the application of a given type of floor is critical. Incorrect adjustment of drains to the type and technology of the floor may lead to **cracks/**

**leaks, which significantly reduce hygiene in the production area, causing surface contamination and accumulation of bacteria in areas of cracking.** There are two basic types of industrial floors – resin, and industrial tiles. Below are examples of types of edge finishing profiles used in industrial plants.

**Edges Reinforcement**

No reinforcement

Epoxy reinforcement

Stainless steel flat bar reinforcement



Here we should also emphasise the importance of **drainage edge reinforcements**, which affect the load capacity of the system. We strongly recom-

mend reinforcing the drain edges at the producer's facilities – which ensures precision and cohesion. **We strongly advise epoxy or flat bar filling as the most reliable materials.** Other filling substances like concrete or rubber would weaken the drains' edges and lead to damage at the junction with the floor.

**Rubber edge filling**

Critical hazard - possibility of cracking points.



The design of drainage systems is a very broad topic. We would list the following as principles:

- maximum reduction of places suitable for bacteria accumulation;
- the most effective cleaning possible.

To a large extent, the subject would form material

Pressed upper part with no sharp corners facilitates removal of contamination and prevents growth of bacteria.

Pressed body, with no sharp edges or welded joints prevents the accumulation of contamination.



for a separate detailed study. Basically, the design and technology are heading towards the **maximum use of deep pressed elements** for the construction of drains. In this way, the number of welds is reduced, and **consequently, sharp corners that are difficult to clean are eliminated.** Only well cleaned **butt welds** are used.

**Tight continuous joints** are very important. The processes of **grading the edges** of elements that come into contact with production personnel during the service of the product should also be checked. A critical point of hygienically designed drainage is the slope. For ATT, the **standard slope parameter is a constant 1%**. Flat bottom drainage design leads to sewage remaining in drainage channels for a longer period of time, which creates an unnecessary hygiene risk for the production facility.





It is extremely important to stress that no matter how well and hygienically the product is designed, **the production quality standards ultimately influence its performance and durability.**

At ATT, quality control and the inherent safety of products are not just slogans, but an extremely important process that is present at numerous stages of the manufacturing process. Our reputation in the industry is certified by multiple periodic audits performed by independent third-parties, such as **TÜV Rheinland, Bureau Veritas, NSF, and IAPMO.** Having developed appropriate procedures, we have implemented and maintained certification in accordance with **ISO EN 1090 EXC-3 and 3834-2** standards since 2015, one of the most prestigious quality indicators for manufacturing and design of steel structures – **1090 Execution Class 3 certification: Fabrication of steel and aluminium structures.** These testify to our ability to carry out highly advanced and technically complex welding projects. As a result, welded structures are not only aesthetically pleasing, but above all **hygienic, safe and durable.** Equally important are our employees' certificates of competence. **International Welding Engineer, Visual Testing - Level 2, Radiographic Testing 2, Penetrant Testing 2, and welding authorisations** in their respective ranges are proof of the top qualifications for the tasks performed in the production process.

Finally, I must mention that the **installation process** is a key factor for every hygienic system in F&B facilities. There is an interesting synergy between the expertise stemming from the professional experience of **ATT's own installation crews,** and the technology departments that apply these ideas to the production process. It also lets us constantly improve hygienic and functional features of our products.

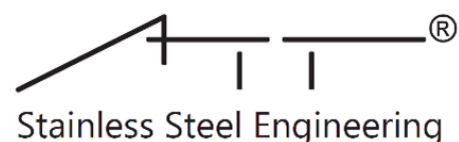
**Why do we sponsor the EHEDG World Congress 2024?**

We view it as **the most important place** for the industry to develop hygienic design and safety standards for customers, not only in Europe, but all over the world. We greatly appreciate the fact that ATT and other prominent producers are deliberating on hygienic design guidelines, and also that these opinions are constantly subject to scrutiny by food and beverage producers.



*Marcin Rębalski, Export Sales Director (ATT) and Chair of the EHEDG Regional Section Poland*

*Krzysztof Kaczmarczyk, Technology Manager  
Michał Rabczuk, Manager of Factory Production Control*



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