



25 years of design,  
engineering, fabrication and  
installation of steel structures



# Schwarzmann group

Founded in 1993, we have grown into a group of 3 companies, a team of civil and structural engineers, project managers, certified welders and experienced installation technicians, who in close cooperation design, engineer, fabricate and install steel structure industrial buildings, aircraft hangars, indoor sports facilities along with complex corporate and manufacturing facilities.

Over the last three years, we have invested in the modernisation of production and expanded our production capacities, and today we can deliver larger buildings within reasonable time frames. Our experienced team guides the clients through the projects – from the idea, through planning, to the execution.

By adopting a personal approach and being mindful of the wishes and needs of our clients, we have successfully obtained references from various industries, from aviation to the food industry. The quality of our products and services has also been recognized in demanding Western European markets. We have delivered numerous major projects in Austria, Switzerland, Germany, France, Great Britain, Belgium, Finland and elsewhere.



## Operating in extraordinary situations

The period marked by measures to curb the epidemic was used by the Schwarzmann Group to accelerate digitalisation and optimisation of processes. Our first steps towards digital transformation included introduction of CRM system in sales, linked to a newly designed website and centralized planning in the engineering process. We obtain important data on the content and marketing approaches that offer our partners the most relevant information to facilitate decision making. With the new online presentation, we put even more emphasis on our customers and their search for solutions for the construction of commercial facilities.

The more emphasis we put on our partners and their spatial needs, the easier we approach the appropriate adjustments and optimisation of processes within the company. At Schwarzmann Group all employees are aware of our responsibility in the process of sales, design, construction and installation

of a facility. In all our activities we strive that the project, from the first steps of our contact with the investor, is aimed at achieving their goals.

Within the Group, we improve processes and look for opportunities for more efficient and faster approaches on a daily basis. From basic steps, such as transfer of relevant input data to the engineering service, to more demanding schedule coordination of the execution of individual phases of planning, production and assembly. Communication with the client is managed by our commercial operators/project managers who ensure smooth running of the project through an active approach to resolving potential issues.

Many partners recognised our good work through reference buildings, recommendations and online project presentations. Some of the latest reference projects are also presented later in this leaflet.



Is your company growing and requires more covered space for its activities?  
Contact our specialist project managers and enquire about our tailor-made spatial solutions!

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## Construction of commercial buildings with steel structure

Over the past period epidemic restrictions have completely paralysed certain industries and reduced both private consumption and major business investment. Some industries have taken advantage of the crisis and greatly scaled up their business at the expense of the needs arising from the epidemic and the imposed preventive measures.

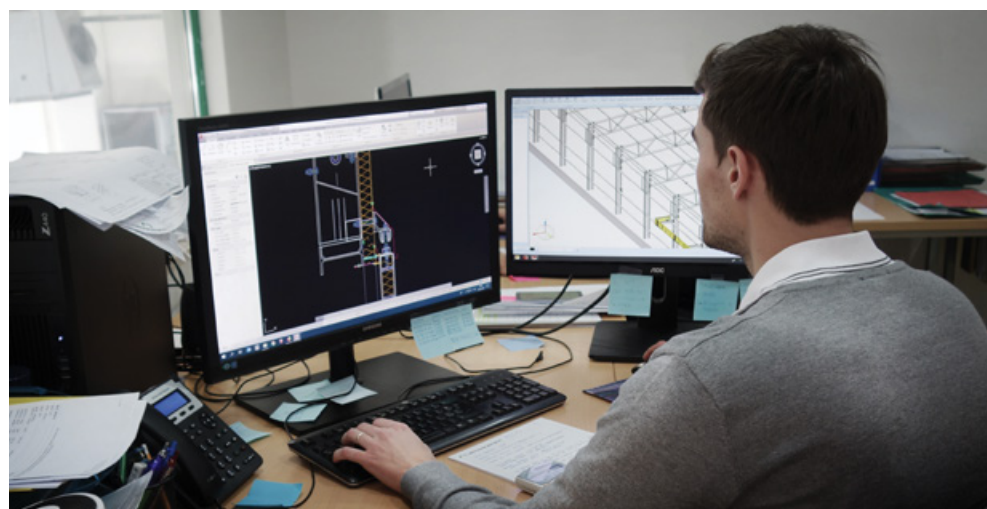
At this time, the industries, which are the main driving force of economic development, focused mainly on digitalisation and improvement of internal processes. At the initial stage of the epidemic, major investments in the expansion of production, storage or other commercial premises were partly postponed or stopped during the planning stage due to uncertainty. After the initial paralysis, the companies continued their activities and adjustments to the situation. The crisis shifted the view from globalisation to more regional and sustainable development, not only for consumers, but also for large economic "players".

In the field of construction of commercial buildings, we are increasingly aware of the importance of sustainability, regional development, use of renewable energy sources and materials, which can be effectively recycled after their service life. Many concrete construction plans were re-designed into a faster, more economical and more durable option using steel structures. The dimensions of the buildings are in no way limited, since steel is also an excellent material for large storage and production facilities.

As with other construction projects, it is very important to carefully plan the investment and define all of the investors needs before the construction and implementation of a building take place. This way, we can also achieve the most affordable course of the investment, and we can complete all the necessary project phases within the agreed deadlines. All this can be ensured by the participation of everyone involved in the project, i.e. investor, designer, supervisor, contractors and subcontractors for the various installed equipment.

## Goal of the Schwarzmänn Group

Our goal is to provide the best possible combination of knowledge, experience, design, technology and sustainable materials. We want to address the specific spatial needs of growing companies in different industries and in different markets and thus contribute to the growth of our partners, employees, local community and the company. We constantly pursue the specific requirements of the industry, spatial needs of our clients, optimisation of internal processes and the development and search for new solutions. As a result we provide the best possible conditions for the execution of buildings with steel structure.







## Production facility in Villach –Investment in the future and regional development

In 2020, STO Ges.m.b.H. from Villach contacted our Austrian company Hallen Schwarzmann GmbH and commissioned a large scale project; a production, storage and logistics facility of dimensions: 35 x 81 x 6.5 m. The STO company is one of the largest manufacturers of various construction products in the world. They are one of the world leaders in facade insulation systems. In 2018, the WTO Group had a total revenue of €1.33 billion.

In the past, we have already delivered some facilities for STO and gained the trust of the management in Villach. We took over the entire process from design, construction to installation. The concrete construction works were carried out by a local construction company.

A special feature of the production building is the 30 m tall mixing tower, which enables the so-called dry production of the products, as a part of the paint manufacturing process that will take place in the hall. The required building fire resistance time is 30 minutes, and the hot-dip galvanised steel structure design is adapted accordingly. The building is covered with Brucha panels (mineral wool insulation material), with 100 mm thick walls, and a 120 mm thick roof. The building stands on deep-seated concrete foundations into which our metal anchors were installed. The supporting pillars of the structure were attached to anchors. After the erection of the pillars, a parapet was concreted between the pillars, which will prevent any intrusion of water into the building at ground.

This will also serve as the protection of the panel walls during the internal handling of materials.

The building is designed with 8 automatic doors, 3 personnel passage doors, 3 loading ramps and windows of various sizes. A three meter wide free-hanging cantilever roof is completely covered with panels and protects the loading ramps on one side of the facility.

The building is also designed with office premises and toilet facilities. There is a transport belt for the transport of material between the new and the existing hall. It is placed under a galvanised steel frame and covered with sheet metal.

The project has been successfully completed. For STO, the focus on the future primarily means regional development and sustainable solutions. That is why the expansion of production in Villach is an important achievement in establishing regional supply for partners in the region with shorter transport routes and more reliable delivery. Hallen Schwarzmann is an important partner in this step.







## Fabric structure facility is also the first choice for waste management in Switzerland

In Switzerland, we installed a WSS type fabric structure facility, dimensions 27.5 x 72 x 10 m, for a large company engaged in the collection and processing of waste. The facility is the main collection point for household waste and is part of the Pfäffikon waste management zone in the Municipality of Freienbach. It is a modern covered collection centre, to which the residents of the municipality can bring waste for recycling with their own vehicles. Inside the fabric structure, there are parking spaces and special collection zones for individual types of waste.

A special feature of the building is the vent in the ridge along the entire length of the building, which is designed so that the ridge is extended on one side, with enough space left for air extraction.

A cantilevered roof is installed on one side of the building, sheltering the area at the side entrance to the building. In fact, the useful height in the building is as high as 10m, which enables waste collection on multiple levels, which is why we installed a metal structure platform and stairs. The height is also adapted for loading containers onto trucks inside the building.

The facility is equipped with snow guards to ensure that snow does not slide off the building. The applicable EUROCOD snow load is 1.60 kN/m<sup>2</sup>. The fabric structure facility is covered with the Sattler PVC membrane (900g/m<sup>2</sup>), with several custom-printed graphics and logos of the company.

The facility had to be placed in a rather limited space between two buildings. Installation was therefore much more demanding. During the first three months of operation, an analysis has shown that dividing the waste collection from households and industry makes separation much more effective.

The new collection centre has two recycling experts present at all times to guide users with tips on how to correctly sort waste materials. This way, the quality of collected waste is much higher, as there is no unnecessary mixing and possible improper sorting. The covered space allows for the uninterrupted sorting of delivered waste, regardless of the weather conditions. Up to 15 vehicles can simultaneously park in the facility, while the one-way traffic is arranged.

The waste collection and processing industry is becoming increasingly important on a global scale, i.e. in terms of sustainable development, environmental protection and the creation of new jobs. In practice, fabric structures have proved to be an excellent solution for the growth and development of the industry, both for waste collection centres and for the processing of waste itself.

In terms of sustainability, regional development and shortening of supply chains are very important. With its location, source of material and approach, the Schwarzmann Group is an important partner for all growing companies engaged in waste management in the region.





## Production plant, Brinox

This year we designed, constructed and erected a two-part production plant with office premises for a high-tech company in Medvode, Slovenia. The company is a supplier of production lines for pharmaceutical and chemical companies. In recent years, they have acquired a considerable number of important contracts, and thus they are expanding their production capacities.

In terms of architecture, the production plant imitates existing surrounding buildings. It consists of two parts. The larger part is covered with a gabled roof, while the smaller structure is covered with a steel lean-to roof also accommodating an attic area. A 3.8 cm thick polycarbonate strip is installed along both lengths running top to bottom at a height of 3 m, which gives the production plant a uniform appearance together with the adjacent building, while at the same time it brings light to both parts of the building. There are 15 roof domes that are connected to the fire alarm central station providing 30-minute fire resistance to the building.

Inside the building, we constructed office premises on two floors with a total surface area of 170 m<sup>2</sup>. In addition, air conditioners for both parts of the hall were mounted on the very top of the office premises.



## Optimisation of storage surfaces

At the end of last year, we presented our partners with a novelty in steel structure facilities, namely a new type of flat-roof fabric structure, which we named Schwarzmänn X<sup>®</sup>.

We were aware of certain limitations of existing structure types and we wanted to offer a structure that will more efficiently use its surface area as well as its storage volume. At the same time, our goal was to provide a structure that is visually appealing and will fit the architectural trends of modern business buildings.

In search of a solution for expanding the storage surfaces at Tomplast in Mirna, Slovenia, we offered our client the Schwarzmänn X<sup>®</sup> structure measuring 42x55 m, with a usable height of 6 m. The client already had four older fabric structures standing on the plot, which were spaced in such a way as to make room for transport routes and to allow snow removal from the roofs. The client's wish was to make better use of the existing plot.

The Schwarzmänn X<sup>®</sup> structure is designed according to EUROCOD and allows snow to remain on the roof. Its shape and uniform usable height enables an increased volume of storage space.



## Auxiliary storage area

For the Salus Group, one of the major wholesalers and distributors of medicinal products, nutritional supplements and medical equipment in South Eastern Europe, we have installed an auxiliary warehouse of the Schwarzmänn X type. Our partner wanted to solve the problem of storage space with a fabric structure facility. They wanted a minimum intervention in the environment in terms of the execution (without additional construction works) and a facility that would visually match the existing buildings.

The only option was a flat-roof structure. Schwarzmänn X has proven to be the optimum choice, both in terms of execution and appearance. Due to limitations of the height as prescribed by the Municipal detailed spatial plan, this type of structure allows the maximum usable height within the facility to be achieved. The auxiliary warehouse has walls covered with Trimoterm Power panels (100 mm) in anthracite, just like the adjacent logistics centre. The roof has the Schwarzmänn X facility design with additional insulation – highly profiled sheet metal, 15 cm of mineral wool and PVC tarpaulin.

The project was completed in less than 4 months, that is from the first contact to putting the facility into service.







## Multi-purpose building on the outskirts of Ljubljana

Right next to the southern Ljubljana bypass we are setting up a three storey multipurpose building. Prit d.o.o. will use the multipurpose building as a service area and offices as well as for residential use on the top floor. The client had already prepared the architecture or design concept for the facility. Schwarzmann conducted the structural analysis design, construction and implementation of the steel structure and the installation of insulating panels and other equipment.

When assembling the structure, it was necessary to adjust and coordinate our schedule with contractors who were executing the concrete frame for the elevator, which will be located in the middle of the building. The mezzanines will be implemented with a substructure and HI-BOND supporting trapezoidal sheet metal covered with a layer of concrete. The project will be completed in April 2021.



## Fabric structure for Volvo, Belgium

Together with our Belgian partner Vervaeke Industrial, we covered 814 m<sup>2</sup> of surface, with a height of 7 m. Assembly took place at Volvo plant in Ghent with intention of connecting two production buildings. The company has been successful both in Europe as well as globally. It also continuously expands its capacities at existing production sites.

Despite the precarious situation caused by the COVID-19 measures in EU countries, we have managed to overcome all the bureaucratic obstacles. Our team carried out the installation on the site smoothly and quickly. Every day, working hours were limited, due to the ongoing production in both surrounding buildings.



## Storage fabric structure, Pümpel

The storage fabric structure of dimensions 30 x 44.5 x 4.5 m was erected at the end of last year at Rankweil, Austria. Pümpel GmbH has a large collection warehouse at this site, which had to be enlarged.

The fabric structure, which was erected on the existing asphalt base, offers over 1300 m<sup>2</sup> additional storage surfaces.

The door is mounted sideways, along the transport route, and enables the transport of materials from individual storage segments of the building. The ventilation of the facility is routed through a roof vent and side ventilation lines covered with mesh. The rainwater is drained through gutters that prevent the accumulation of water next to the building. New storage areas enabled the company to increase its volume of wholesale construction materials.



## Energy Rehabilitation of Eurogarden Shopping Centre

For many years, we have been supporting Eurogarden in the growth and development of its garden centre on the outskirts of Ljubljana. In its original form, we produced and delivered the garden centre already in 2003. During the years, at the request of the investor, we have also added several overhangs to the main building, which allow for outdoor sales and the protection of goods, plants and exhibits outside the garden centre.

The investor's wish was to renovate the existing garden centre to be the most modern centre in Slovenia and beyond, carry out energy rehabilitation and improve its visual image. The execution with a single business partner was crucial. At Schwarzmann, we approached the project ambitiously with quality ideas. We offered comprehensive support to the investor during the development and design process. The investor thus received a modern garden centre and an energy-saving facility without interruption of operation.



## Expansion of storage facilities for PET material recycling

The PET to PET company is the largest company recycling PET material in Austria. In the record year of 2020, in spite of the COVID-19 crisis, more than 28,000 tons of PET bottles were recycled. For storage purposes, we have in recent years erected three fabric structures with a total surface area of over 2500 m<sup>2</sup>. Their special feature is that they are open along one side, allowing the material to be stacked into the facility. Along the open side of the building there is a transport route, which is a prerequisite for the rapid manipulation of stored granulates.

In 2020, the new Starlinger granulation system was built at the site to increase recycling capacities and the supply of granules. PET to PET contributes significantly to the functioning of the circular economy in Austria. Due to continuous expansion and optimisation of processes, it is one of the most advanced PET recycling companies in the world.



## Composting plant in Krems an der Donau, Austria

For Brantner Group, one of the largest waste management companies in Europe, we will supply and start the assembly of a composting plant at the site in Krems in May. The Brantner Group manages five landfills, three sorting plants, five composting plants and four other processing facilities in Austria.

The steel part of the structure will be placed on the concrete wall. The composting plant is 42.3 m wide and 119 m long. One part is 35.8 m wide and 38.8 m long. In total, the composting plant will cover more than 6400 m<sup>2</sup>.

Steel components will be hot-dip galvanised with a thicker application than usual, when it comes to regular storage. This way, the steel structure will be more resistant to gases generated during the composting process. Other parts of will also be adapted for the specific environment and use of the facility.

