

# Gallery



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BAUMAX, Graz, Austria



CARRERA OPTYL, Ormož, Slovenia



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# informa

No.9

Year 2003



- Trimoform
- Supernova
- Pharma Park
- Toko
- Hall Anwil
- Ak Nar
- Integra Mostar

 Trimoform

# Trimiform

## TRIMOFORM ROOFING

Since ancient history a roof above the head has been one of the fundamental needs of a man. If the roof mainly represented a way of survival in ancient history it has developed through the history due to new materials, technologies and forms and has always gained a new appearance. It has become an increasingly important element of architecture and the environment in the broadest sense of the word. Slovenia is a crossroads of cultures and natural environment, which reflects in the typology of the architecture of living places.

**N**ew technology enabling also "transverse" modelling of sheet metal has opened new opportunities to the designers. When planning the Trimiform roofing the following fundamental starting points have been taken into account:

- Universal character of a form with a possibility of adjustment to different environment,
- Unique form being different from roofing types of other European producers.

Trimiform is actually a hybrid of various roofing typologies and therefore it merges



well into various environments (Alpine, Mediterranean, Pannonia, etc.). Unique character and recognition have been mainly achieved by the introduction of a dense grid that is turned as a mirror. The evident difference in height between the highest and lowest part emphasises the playful character of the complete texture. This solution becomes specially visible in light since the game of light and shadows

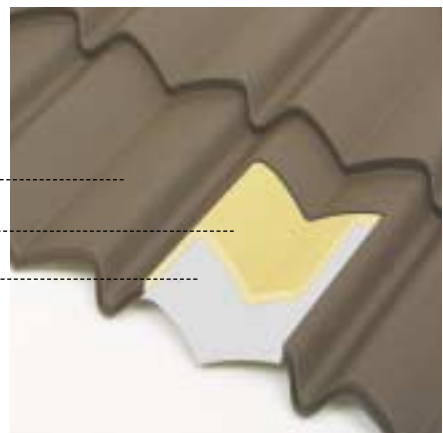
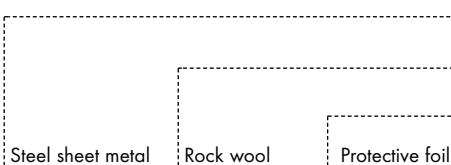
constantly draws and slightly changes the appearance of the roofing. The innovative solution of applying rock wool and the dimension adjusted to a pallet transportation system represents the quality and advantage of Trimiform. Many new elements produced in a series that reduced the possibility of defects in the manufacture of individual details in the finished roofing have been introduced in comparison with TPO - dom. Least, but not last, they have a strong impact on the aesthetic appearance of the roofing.

Prof. Vladimir Pezdirc (Designer)



Trimiform excels in good insulation properties:

- Prevention of condensation,
- Thermal stability,
- Noise reduction,
- Fire protection.



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# Introduction

Dear friends of steel!

Beds of tulips and other flowers rocking us into spring dreams are a warm welcome to spring. They really cheer us up with their bright colours after long winter months. Clever and original ideas for the decoration of flowers and arrangement of gardens can produce real works of art.

In the present Informa we would like to present a spirit of spring, but mostly creativity. Each building shown represents balance among knowledge, imagination and inventiveness on one hand and possibility and understanding on the other. But not only the balance. It means a lot more. It is a surplus enabling us to climb above the average. It is the opposite of the monotonous meaning that there is still a lot to be done in the future.

Possibilities in this fast developing world are endless. Space or a building will determine quality of human activities and details will be included in life of an individual. So it is the people who approve the details, forms, etc.

And we are again at the beginning of our story. It is up to us how we start implementing wishes and achieving success.

Editorial Board of Informa



# Complete solution

## SUPERNOVA

Large shopping centres have recently become a very important topic in the architecture. A high number of these buildings not only in Slovenia, but also in other countries poses questions about the method, architectural and technical tools of their quality merging in modern urban and suburban environments.

In recent years this architectural topic has developed from anonymity and even from the negative character; it has become an important and unavoidable factor of designing architectural environment of modern Slovene towns. Due to this fact it is of vital importance to consider the optimal architectural solutions and construction - technical approaches that may contribute to their quality merging into the environment. This topic includes also adequate selection of the used materials and static structure. The surface, functionality and programme concept of shopping centres require the most flexible and ultra light structure materials that are attractive or enable sufficiently attractive dialogue between the environment and the architect. These are buildings that have to express the temporary character (since their contents change constantly and adjust to the changes in the society), reliability and functional character of a building which does not only offer brand names in its interior, but has also become a brand name "per se". The shopping centre "SUPERNOVA" in Koper fulfils all the above-mentioned criteria and answers several of the questions posed. It is a good example of excellent use and selection of modern materials (specially eye-catching is the steel) and structural and designers' solutions. The floor of the centre, large spans and surfaces as well as dynamic loading (parking places on the roof), wind, use of a composite structure, speed and accuracy of the performance and assembly deserve special attention. An almost symbolically determined architectural and construction element:

a panoramic screen with its perforated and slightly diversified steel structure faces almost all of the mentioned technical and architectural challenges that the shopping centre "SUPERNOVA" has met. This screen establishes a symbolic dialogue with the Karst strong wind, the coastal sky and the evergreen plants of a winter garden. It is simultaneously light and stable, open (from the interior) and closed (from the exterior), uniform and expressive; a connecting bridge emphasises all advantages of steel: bridging of large spans, lightness of the structure and its reliability. An advertising tower proves that steel is the only material that can reach such great emphasis in height on this ground and under such wind loading, naturally, under the consideration of economic justification. The economic justification of shopping centres becomes most evident in the speed of construction (only a short period of time can pass from

### Project data

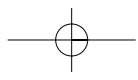
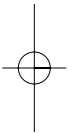
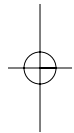
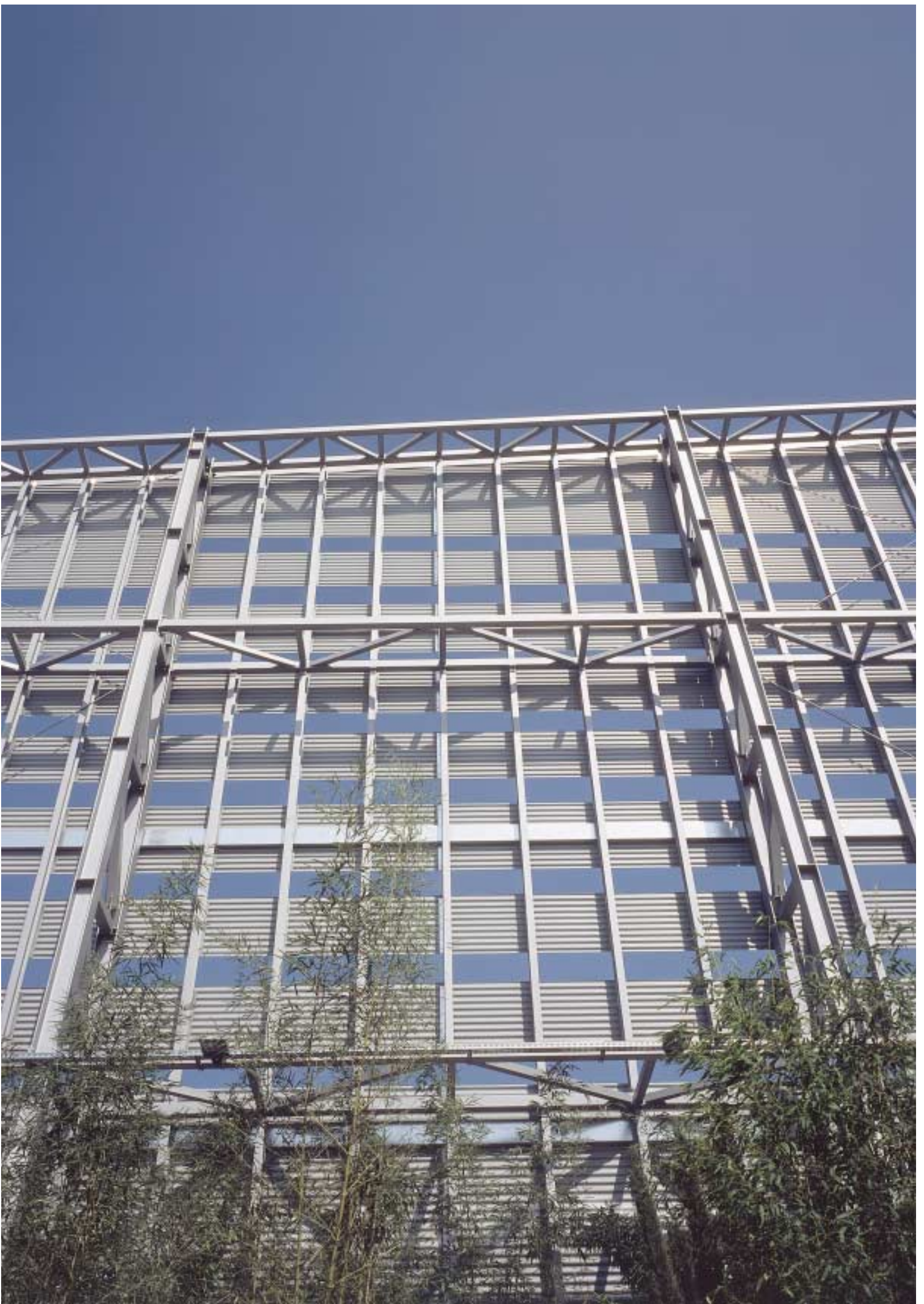
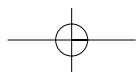
Country: Slovenia  
 Investor: Immorent Beta d.o.o, Ljubljana  
 Architect: Arno Mick, B.Sc. (Arch.)  
 Expert in statics: Jože Drčar, B.Sc. (Statics)  
 Building surface: 28,000 m<sup>2</sup>  
 Elements:  
 Construction: Steel structure; 2,266 t  
 Facade: Trimoterm FTV; 9,618 m<sup>2</sup>  
 Profiled sheet metal; 16,500 m<sup>2</sup>



the first investment into a building to its use), in the price of subsequent additional building and changes in shops or multi-functional character of the building. Also in case of such buildings steel has played an irreplaceable role - it has become a reference model for the majority of the future shopping centres and similar public buildings.

Miloš Ebner, B.Sc. (Arch.), MBA





# Trimo in architecture

## Pharmaceutical complex PHARMA - PARK

The structure of the new pharmaceutical complex Pharma - Park requires construction in several stages, lasting 5 or more years. Preparations relating to the project were in progress in 2000, and the construction began in 2001. New technology in this production line foresees development of basic raw materials that will enable further development of the production, use of these materials and their processing in various production processes and lines.

The project is based on the criteria of flexible development of production units (modular concept), quick and adjustable up-grade of new capacities (the infrastructure built), fast and flexible adjustment of the existing capacities to the changes and adjustments to the existing production capacities and the situation.

The concept of the buildings is based on a load-bearing steel structure, adjusted to the basic module and the wainscot (roof and facade), dictating the modular system.



The decision on the selection of Trimo fire-resistant roof and facade panels has depended on the basic structural conditions (modularity and flexibility), adequate quality of panels that corresponds to the requirements of structural criteria, on the aesthetical appearance of panels or the complete

facade and fire-resistance of panels (supported by the AEAI certificate). Co-operation with the architect, selected contractors and full technical support of Trimo resulted in a new performance of a facade and flat roof without inclination having a membrane insulation that is fixed directly on Trimo panels.

Facades are performed to enable optional fixing of glazed elements and filled facade elements. Fixing of a facade is carried out in a vertical direction by use of standard profiles for fixing of facade elements. Application of additional elements for panel fixing enables flexible use of Trimo panels in a thickness of 100 mm, 120 mm and 150 mm. The facade is carried out by covering profiles; it is flattened from the external side and window elements are in the same level as the panels. The difference in thickness of facade elements on the inner side is levelled by vertical strengthening profiles that are fixed on the load-bearing steel structure.

The flat roof performance on the building mentioned is a novelty in Switzerland. Roofs are carried out by Trimo panels that are smooth from both sides. A synthetic membrane (covering) is fixed on the panel topside, which gives panels the load bearing capacity. In accordance with the proposal of Trimo the roof smooth panels are fixed in the load-bearing structure only from the

### Project data

Country: Switzerland

Investor: Unione Farmaceutica  
SA Barbengo

Architect: Ph.D. Ilaria Marchesini Fossati,  
Arch.

Elements:

Facade: Trimoterm FTV 100, FTV 120  
and FTV 150; 2,250 m<sup>2</sup>

Roof: Trimoterm FTV 150; 1,450 m<sup>2</sup>

bottom - inner side by means of special fixing profiles made of bent thick sheet metal.

The concept and performance of facades and roof have proved to be good solutions in terms of aesthetics as well as in terms of assembly, but mainly as an effective and simple fixing method.

Janez Lapajne, B.Sc. (Arch.)



# Trimo in architecture

## TOKO-Domžale

The facility for the production and sales activity of the company TOKO from Domžale was completed in 1976. Due to the termination of operation on this location the facility has got new owners and new purpose of use. It has become a sports-recreational and sales facility.

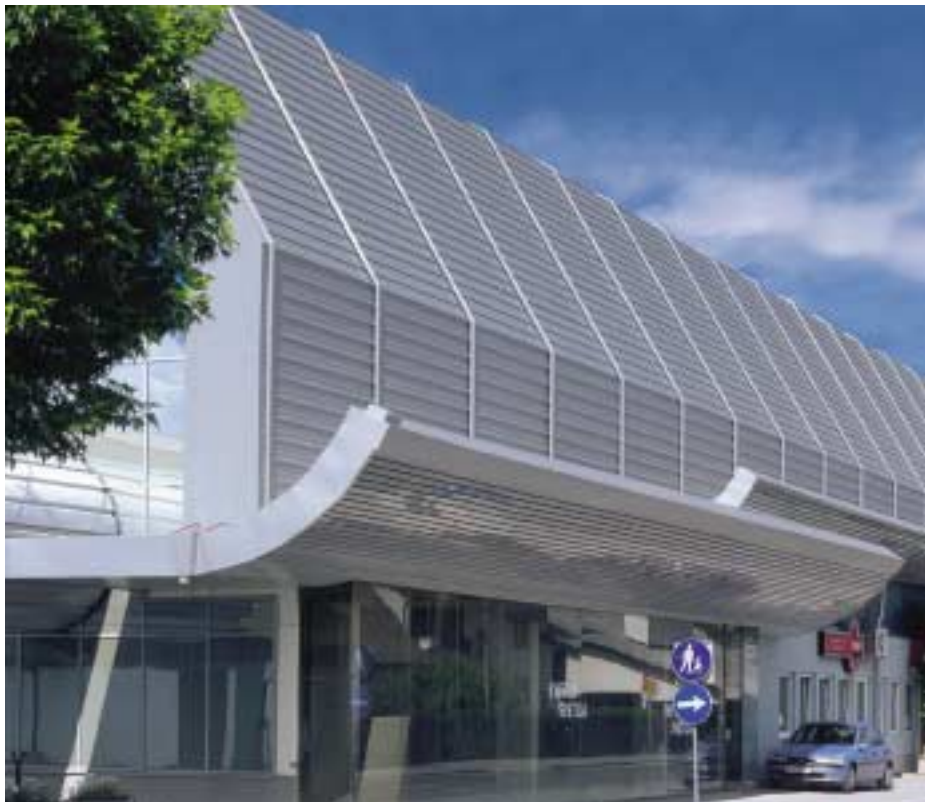
### Project data

Country: Slovenia  
 Client: N-INVEST d.o.o. Domžale  
 Architect: Radislav Popović, B.Sc. (Arch.)  
 Building surface: 1.200 m<sup>2</sup>  
 Elements:  
 Construction: Steel structure; 9 t  
 Facade: Trimoterm FTV; 120 m<sup>2</sup>  
 Profiled sheet metal; 900 m<sup>2</sup>

With respect to the new function of the facility and obsolescence of some old materials on the facade the reconstruction of the complete facility had to start. A special emphasis was placed on the facade form with the purpose to point our new functionality and appearance of the facility in the environment by visual effects and quality material under the consideration of specific position in the centre of Domžale. Elements from a wide sales range of Trimo fire-resistant facade panels have been selected.



The fundamental casing of the facility has not been changed with respect to the preliminary facility form during the construction. The selected facade with an adequate



sub-construction and additional strengthening has enabled "putting of a shell" on the old facade. Specially demanding was the performance of round elements with minor diameters and performance of suitable cover flashings.

The selected facade colours of the facility range from silver to dark grey shades which shall emphasise the solid character of the facility and quality technical performance of inner programmes.

This reconstruction of the facility and use of new material have contributed to accentuation of town planning in Domžale.

Radislav Popović, B.Sc. (Arch.)

# Trimo in architecture

## Sports and Entertainment Hall in Włocławek

In the world filled with Cubist buildings this facility distinguishes by application of double-curved surfaces. The Archi-Line company led by architect Wojciech Rzyżyński as the designer of the sports and entertainment hall in Włocławek, based on the fascination with Parableum - the arena in Releigh (North Carolina) - has created one of the most modern sports facilities in Poland.

### Project data

Country: Poland  
 Investor: Hala sportowa Anwil  
 Client: Rembud Sp. z o.o.  
 Architect: Wojciech Rzyżyński, Archi-Line,  
 Sp. z o.o.  
 Building surface: 6,400 m<sup>2</sup>  
 Elements:  
 Facade: Trimoterm FTV 100; 3,352 m<sup>2</sup>

The project is based on solutions utilizing large-span linear structures (82 m) and provides unique character to the facility. Structures of this type have been used in the majority of key Olympic facilities.

An innovative and interesting solution is also provided by the exposed and sloped reinforced columns consisting of elements of frames that support the grandstands and thus ensure good field of vision and optimised grandstand width. The columns bear the system of light steel tubes constituting the saddle-shaped linear roof structure.



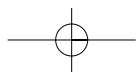
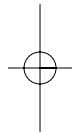
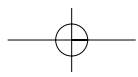
The new hall is compliant with all standards of international sports federations concerning team games like basketball, volleyball, and handball. The facility has 4,500 permanent seats arranged on two symmetrical grandstands. Movable sectors are added depending on the discipline.



Trimo has provided a light casing for the facade - FTV 100 panels. They serve as aesthetic casing elements and material providing protection against fire.

The cooperation with Archi-Line as a company whose specialization includes designing sports facilities gives us a chance to develop in the market sector of sports facilities.

Macej Siecla, Mgr inż.



# Trimo in architecture

## AK NAR Brewery

Trimo has continued its co-operation with well-known breweries in Europe and Asia. A modern and quickly developing Kazakh brewery Ak nar brewing beer of the known local brand name Derbes (beer brewed according the German beer recipe - Pilsner) decided on a large investment project in the last year.

**T**rimo was very glad to be able to participate in the implementation of this development project of Ak nar.

Due to the construction of new production facilities in Almaty the brewery Ak nar increased its production capacities from 50,000 hectolitres to 300,000 hectolitres of beer a year.

A complete production complex from the malt house to the brewing section and fermentation section was built.



In accordance with the project a combination of horizontal assembly of Trimoterm facade panels in a width of 1000 mm and 1200 mm in metallic colour and the well-expressed attic made of the profile TP 750 in blue was used. Over 5,100 m<sup>2</sup> of FTV 120 panels and 5,800 m<sup>2</sup> of TP 750 profile were used in the construction of all production facilities.

The festive opening of the production facilities took place on 1 November 2002. The Ak nar brewery has already started producing and selling Derbes beer from its new production facilities.

### Project data

Country: Kazakhstan

Investor: Ak nar Company Ltd, Almaty, Kazakhstan

Elements:

Facade: Trimoterm FTV 120; 5,100 m<sup>2</sup>  
 Profiled sheet metal TP 750;  
 5,800 m<sup>2</sup>



Damir Kočan, B.Sc. (Econ.)

# Trimo in architecture

## INTEGRA Mostar

The idea of the business building Integra has been developed as a mixture of ideas, very different opinions, ambitious plans and great efforts of a creative project team in charge of the architectural and construction works.

The building is located in the most beautiful historic part of Mostar, BIH. Stone with its cold and dignified modern architecture presents a striking contrast when compared to the environment and is a characteristic of the region in terms of construction.

A suspended, ventilated aluminium and glazed facade made in accordance with the Schueco systems is performed in the circular central part.

The complete building is wainscoted by the Trimoterm FTV-60 facade panels that are fixed on an adequate sub-construction. Panels painted in RAL 9006 are placed horizontally by omega profiles for invisible fixing. Vertically placed panels are in RAL 9007.

Special attraction is achieved by the selected arrangement of facade openings, which

challenges attention by a combination of modern materials, without any superfluous details in the construction.

5,600 m<sup>2</sup> of useful surface in the building is divided into seven storeys. There are parking places in the underground, offices on the ground floor and offices of major companies are located on the remaining storeys. The concept of the structure enables uninterrupted changes in the arrangement of partition walls and free organisation of offices, which results in a slightly different arrangement. Transparency of the working environment is ranked first. Simultaneous connection of all parts of the building in a unit is enabled due to a central staircase and two lifts.

This architectural plan is a product of a corner building concept on the crossroads of two roads, which symbolise two opposite architectural styles visible on this location.



### Project data

Country: Bosnia and Herzegovina  
 Investor: Group of companies - on their behalf ECO PLAN Mostar  
 Architect: Borislav Puljić, B.Sc. (Arch.)  
 Building surface: 5,600 m<sup>2</sup>  
 Elements:  
 Construction: Steel structure; 8 t  
 Facade: Trimoterm FTV 60; 1,600 m<sup>2</sup>



The architecture of the building is radical, recognisable and unique in its environment.

Borislav Puljić, B.Sc. (Arch.)