



UNIBEP SA \*BEHIND THE SCENES\* PHOTO: BIASIMO MEDIALNO

# THE BUILDINGS THAT MAKE YOU HAPPY TO BE ALIVE

The modular multi-family buildings produced in Bielsk Podlaski by Unihouse, which is part of the construction company Unibep SA, are economical, nice and unique. The houses are all the rage in Norway. They are also being constructed in Sweden and Denmark, and have aroused great interest in Germany. “Our products meet world standards in terms of environmental protection, noise and airtightness,” says Roman Jakubowski, director of Unihouse.

**B**ielsk Podlaski is a town of 28,000 people located close to Białowieża Forest, Europe’s largest primeval forest complex and a UNESCO world heritage site. The town is home to the Unihouse plant manufacturing modular buildings. “We have a production capacity to manufacture around 700 modules, or 40,000 sq m of usable space, a year, which makes us one of the largest European companies in this sector,” says Roman Jakubowski. “At present, most of our output goes to the Norwegian market. We hold Norwegian technical approval certificates for the construction of buildings in the modular and panel systems. We also construct buildings in Sweden and Denmark.”

In Norway Unihouse has already constructed multi-storey residential buildings with more than 1,300 apartments. Additionally, almost 400 apartments are now under construction. Unihouse has carried out its projects in Oslo, Stavanger, Ålesund, Trondheim and Tromsø, a city beyond the Arctic Circle.

The modules are manufactured in an ultramodern factory with specialist state-of-the-art equipment, most of it made in Germany. Floors and roofs are made in the first production hall. The production of walls and the assembly of modules takes place in another hall. Then, all the necessary systems – like wiring and ventilation – are added and the modules are finished on a turnkey basis.

In fact, the modules are something more than a turnkey product because they come off the assembly lines complete with bathroom and kitchen furniture and appliances.

Prefabricated in this way, the modules are transported to the place where the multi-family building is to be erected. First, they are transported by road, then by ships, and then again by road to the construction site where the foundations have already been built.

“The modular buildings made by Unihouse may be termed as friendly to the environment, the customer and the people who will be living in them,” says architect Marcin Rudnik, deputy head of the Unihouse Design Department. “The reason is that the material we use to produce the modules is wood – a natural

product, which creates a very good microclimate inside the buildings, making them healthy and comfortable to live in. A very short time needed to erect the building on the construction site and the ability to assemble the modules in winter on a previously built foundation are great advantages. The modules are prepared, assembled and finished all year round without a break because the production process takes place in heated buildings, which also means that the employees have comfortable working conditions. Apart from good insulation, our buildings are also characterized by excellent airtightness.

When you browse a catalogue of projects implemented by Unihouse it is impossible to come across pictures of identical buildings. "This is because we approach every project on an individual basis. The buildings are custom-built by our designers and engineers, complete with interior furnishings and fittings, in keeping with the clients' wishes," says Roman Jakubowski. "The production process is carried out by well-qualified personnel, using modern tools and a production line from the German company Weinmann. The quality of the materials used to produce the modules – for example, wood, windows, doors and insulation materials – is of world-class quality."

At present, most of the Unihouse's output is sold in Norway and the company is well known and highly valued on the local market. Modular buildings can be erected on slopes, rocky soil, sandy soil, sites with a high water table, and even on the roof of an existing building. They are placed on a base supported by a pile foundation. Such buildings can be moved from place to place and, if necessary, even dismantled and then re-assembled. They can also be easily enlarged by buying further modules and adding them to the existing building. They can have any architectural form. They are like "large Lego bricks," which are stacked one upon another. The five-storey and six-storey wooden blocks of flats constructed by Unihouse do not resemble wooden buildings at all.

One can construct not only residential buildings in the modular system, but also office buildings, hotels, dormitories, kindergartens, schools, outpatient clinics and so on. Many applications are possible.

Modular building has numerous advantages. Among the most important ones is the short time needed to construct a modular building – it takes about six months from the design stage to completion compared to at least 18 months needed in the case of traditional building. Although a modular building is made of wood, there is no risk of fire because the timber frame is shielded

by non-flammable construction materials. Buildings constructed of wooden modules are much more soundproof than brick buildings and at the same time very durable. Unihouse cooperates on a daily basis with scientists of the Białystok University of Technology. The scientists examine the modules to check whether they are sufficiently soundproof and airtight. Only the modules which have been confirmed to meet high standards in terms of acoustics and airtightness can leave the factory.

"We have successfully sold our modules in Norway for years. They have excellently proved their worth, even though the weather is harsher there than in Poland," adds Roman Jakubowski. "A wooden building is not synonymous with poverty, but with environmental protection and contact with nature. It is a symbol of Norway. As a matter of fact, you do not need to win them over to timber-framing technology because they have known it and used it for years.

In July 2015, Unihouse signed a contract for the construction of passive buildings in Trondheim. The project is called Miljøbyen Granasen B5-3. The innovative, energy-efficient buildings, which meet high Norwegian standards, will be constructed in one of Europe's biggest passive housing estates.

New markets are opening for modular houses. The first buildings produced by Unihouse have appeared in Sweden and Denmark. And this is merely the beginning.

"Modular building is expanding quickly in Europe. German institutional and private investors have taken a keen interest in the Unihouse product. What persuades them is especially the short construction time and the quality of workmanship," says Marek Iwańczuk, director for exports at Unibep SA. "Today, when there is the need in Germany to build quickly, our product seems very attractive. Unihouse has also started cooperation with the Swedish company Cramo, which operates almost throughout Europe.

Groups of foreign guests who want to see how wooden buildings are produced visit the Unihouse factory every several months. Most of the visitors are surprised that almost all of the work is done at the factory and only the assembly of the modules takes place on the construction site. "It is an excellent idea," they say. It is hardly surprising that the company receives more and more inquiries from across the world regarding the production of modular buildings.

Unihouse is part of Unibep SA, a construction company which celebrated its 65th anniversary last year. Unibep, in which Polish owners have a majority stake, has been listed on the Warsaw Stock Exchange since 2008.



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Unibep is a general contractor on construction projects in Poland and abroad and has its own company operating as a developer and selling apartments in Warsaw and Poznań. It is also active in the road and bridge building sector.

When the company celebrated its 65th anniversary the main motto was "knowledge, passion and confidence." The same is the case with the production of modular buildings – the Polish engineers have the knowledge to construct buildings of world-class standards, do it with passion and one can trust them. Nearly 1,500 home owners in Norway and major developers in the country have already placed their confidence in Unihouse. Time has come for the whole of Europe. •

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