

A LEADER IN LIGHT STEEL FRAME CONSTRUCTION



ENERGY EFFICIENT BUILDINGS

21ST CENTURY TECHNOLOGY



THE OWNERS

Strategically operating out of Hungary to serve Europe, Asia and Africa.

The Founder has been in the construction industry since 1975, having gained vast experience in Canada and internationally including projects for the Olympic Games in Montreal, Los Angeles, Barcelona and Seoul

Family owned company operated by father and son



COMPANY PROFILE

The Hungarian company was founded in 1992.

HORIZONT™ Steel Frame Construction was added to the portfolio in February of 1997

"As a highly innovative firm we continuously strive for the most modern solutions by ongoing research and development"

We can manufacture up to 400 000 m2 of building per year.







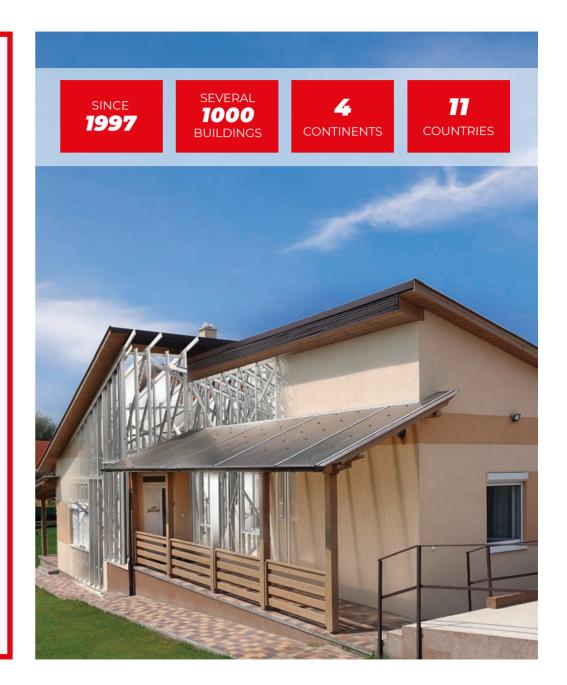














ENERGY EFFICIENT BUILDING TECHNOLOGY

HORIZONT™ is the proprietary name for an advanced energy efficient light gauge galvanized steel frame building technology, suited for :

HORIZONT™ BUILDING STRUCTURES

Residential, commercial, industrial and social housing, container ranging from the most simple to complex luxury building.

HORIZONT™ ROOF SYSTEMS

Roof trusses and built-in and built-on roof tops (low heat and cooling system)

HORIZONT™ WALL SYSTEMS

Interior and fill-in exterior walls for high rise concrete structures

HORIZONT™ BEAMS, HEADER and JOIST- FLOOR

ABOUT THE COMPANY

We support our "Franchise Like" HORIZONT™ Contractor Network and customers with the following SERVICES:

- Consulting
- Cost calculation
- Production plans
- Manufacturing of steel profiles
- Assembling and building
- Education programme for our Building Partners
- Franchise Network

Complete INTERNATIONAL TECHNOLOGY TRANSFER including planning, manufacturing, software and equipment





OUR TEAM

Our professional team of experience architects and engineers are continually developing our Building Technology making it more efficient and economical.

We work with the Hungarian Technical Universities and the **Hungarian Construction Research Institute.**



HORIZONTTM **CERTIFICATIONS**

- Euroconform Hungarian Technology Approvals for Building permit (NMÉ)
- ▶ ÉVOSZ Hungarian Construction Association
- ▶ (MAKÉSZ) And founder of Hungarian Light-Weight Construction Association
- ▶ E.U. Energy Efficiency label
- ▶ ISO 9001 International Organization for Standardization
- Hungarian Passive Home Association

CE mark (for our rollformed steel)



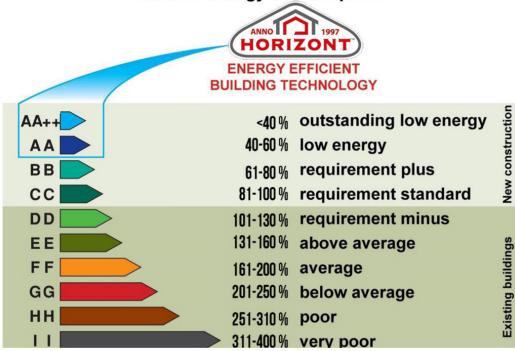


ENERGY CONSUMPTION

SOME EXTERIOR WALL OPTIONS

Energy consumption certification in Hungary

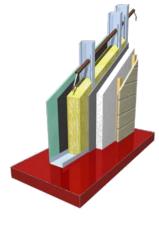
Scale of energy consumption



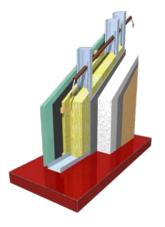
Our energy certification rates from AA to AA++ witch is the highest energy conservation (0 energy Passive Homes can be built with our technology) leaving a very low Carbon footprint



Heat transfer value U = 0,187 W/m2K



Heat transfer value U = 0.144 W/m2K



Heat transfer value U = 0.104 W/m2K

ADVANTAGES COMPARED TO BRICK OR CONCRETE

ENERGY EFFICIENT (min. U=0,2 W/m2K)

ECONOMICAL

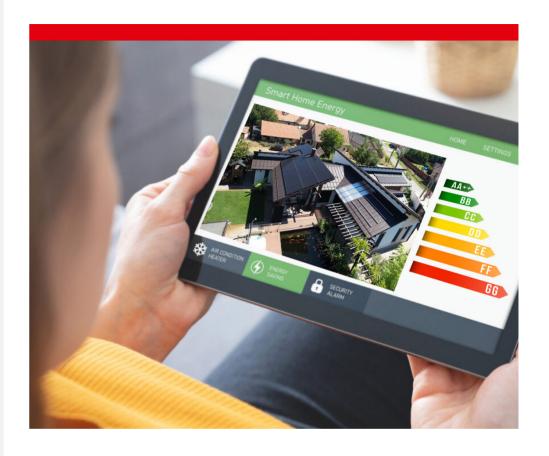
- smaller foundation required
- transportation cost are minimal
- lower labor cost
- minimal waist (less than 0,5%)

MORE USABLE LIVING SPACE (~5 to 15%) FLEXIBLE DESIGNING

CLEAN BUILDING (minimum waste) DURABLE, SUSTAINABLE VALUE

PRECISION BUILT (does not get wet) INDUSTRIAL FACTORY PRODUCTION IS POSSIBLE

AIR-CONDITIONING AND HEATING - (easy to heat or cool quickly) HIGHLY EARTHQUAKE RESISTANCE



MANUFACTURING AND ASSEMBLY

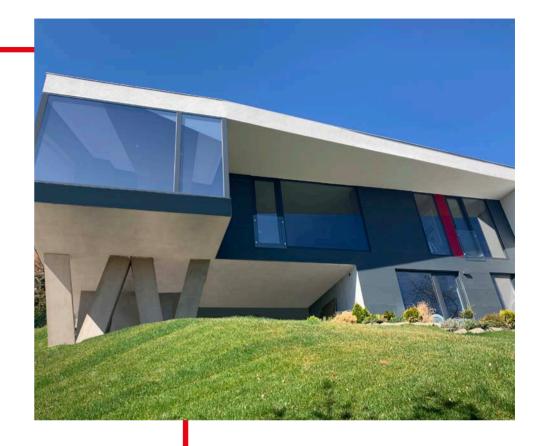
- Roll-forming, precision pre cutting and punching the steel profiles
- Assembling the steel into panel frame units
- Mounting the building frame structure
- Insulating, plumbing, electricity and finishing the building
- Alternative: Pre-fabricated panels are advisable for certain projects or high volume production





WHAT CAN YOU BUILD WITH IT?

- Complete buildings
- Structures:
- Walls
- Joist Floors
- Supporting beams
- Roof trusses and roof tops





RESIDENTIAL:

- Family homes
- Luxury homes
- Row house
- **Apartments**
- Social or low cost housing
- Emergency shelters
- Mobil buildings
- Military installations

COMMERCIAL AND SMALLER INDUSTRIAL BUILDINGS

- Healthcare centers
- Kindergartens
- Schools
- Offices
- Small storage buildings
- Car dealership
- Hotels





LIGHT WEIGHT STRUCTURE

- Less foundation requirements
- Shipping costs are lower
- On site building is easier
- Very suitable for built in and built on roof tops





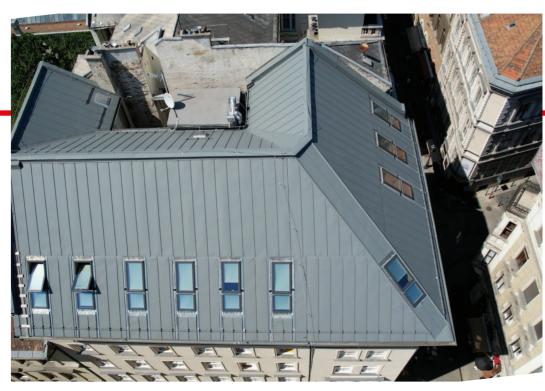
BUILT ON ROOF TOP

 $217\ m^2$, 1 level addition on the top of an existing building in the I. district of Budapest

BUILT ON ROOF TOP

Budapest, Erzsébet krt. 35. 6 Luxury apartments 900 2 level addition on the top of an existing building in the city center





ON-SITE BUILDING

Pre assembled frames





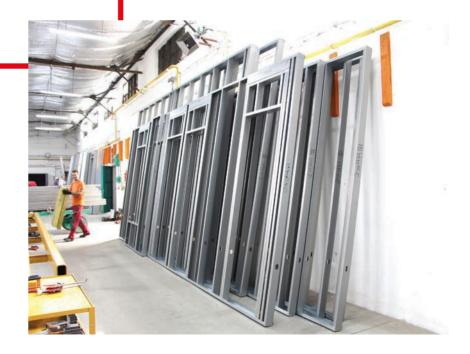


ON-SITE BUILDING

Pre assembled frames







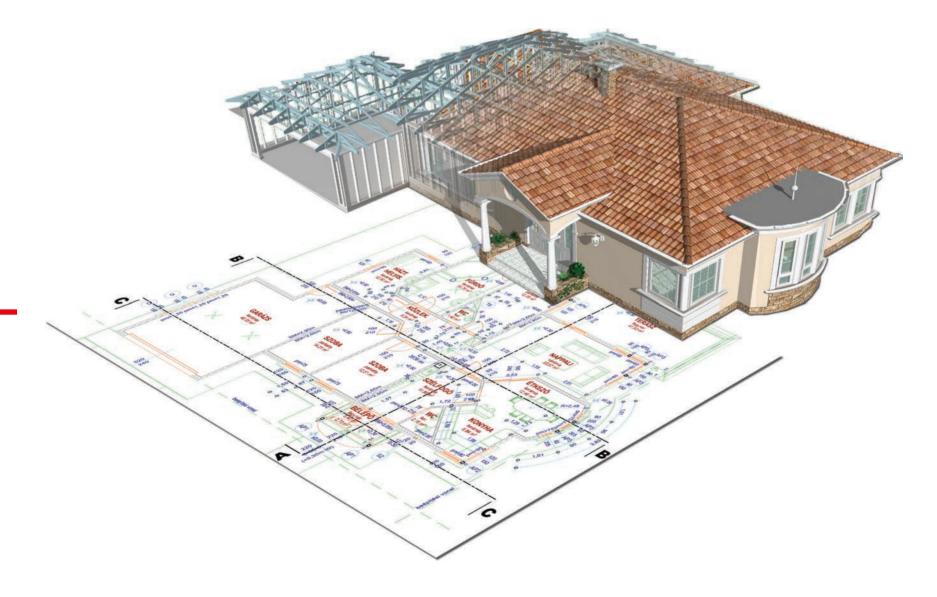
BUILDING WITH LIGHT-WEIGHT STEEL STRUCTURES

Light gauge galvanized steel is used world-wide, ranging from automobiles manufacturing to the building industry. According to international research institutes, the life expectancy of steel can be up to 200 years and it is 100% recyclable.





ENERGY ANALYSIS EXAMPLE



ENERGY CONSUMPTION

U=0,30 W/m2K Energy loss: 15% U=1,60 W/m2K U=0,45 W/m2K 27% 34%

U=0,50 W/m2K 24%

ENERGY ANALYSIS

Energy analysis results:

Structure	Heating required (kWh/m²a)	Category	Cooling savings %	Heat savings %
Criteria "standard "	85,16	В	0%	0%
HORIZONT ™ Standard	55,90	A	10%	35%
HORIZONT ™ Optimum	48,63	A	40%	43%
HORIZONT M Premium	32,51	A +	50%	62%

ADVANTAGES OF HORIZONT STEEL

Minimum weight - maximum load bearing, Consistent quality Economically measurable

Healthy environment, (steel does not cause allergies)

100% non combustible (will not burn)

Very durable

Virtually no waste (it is cut to size)

Termite and rodent proof

Green Technology Environmentally friendly (steel is 100% recyclable)





OTHER ADVANTAGES

4 seasons, all year building

Freezing does not effect the steel construction

Very light

~ 10 times lighter than brick or concrete





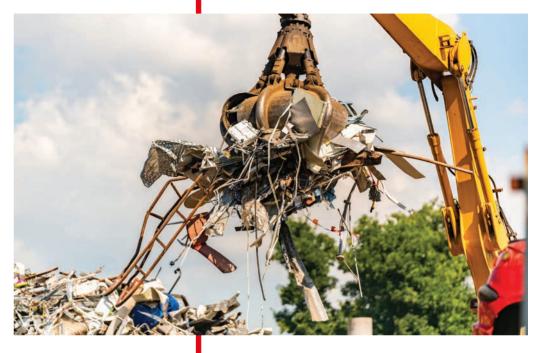
Stable and flexible:

- Wind resistant
- Earthquake resistant (8 on Richter scale 11 on Mercalli scale)
- 0,4 g ground acceleration test

ECOLOGICAL TECHNOLOGY

Life cycle of building materials:

- production
- transportation
- construction
- use (heating)
- tearing down
- reused







WORLD WIDE

OUR HORIZONT™ ENERGY EFFICIENT BUILDING TECHNOLOGY IS CONTINUOUSLY SHOWING MARKET SHARE GROWTH.

New project on there way:

- Switzerland,
- France,
- Austria,
- Germany,
- United Arab Emirates and Iraq
- Russia
- Slovakia



A FEW MORE REFERENCES







SUMMER HOMES







































































MULTIFAMILY HOMES









MULTIFAMILY HOMES









MULTIFAMILY HOMES









MULTI-STOREY BUILDINGS









COMMERCIAL AND INDUSTRIAL









COMMERCIAL AND INDUSTRIAL







IT WOULD BE OUR PLEASURE TO GIVE YOU A TOUR OF OUR MANUFACTURING PLANT, SHOW ROOM AND INNOVATION CENTER AT OUR HEADQUARTERS IN BUDAPEST.



- **Family homes**
- **Public buildings**
- **Commercial buildings**
- **Industrial buildings**
- **Smaller Industrial halls**
- In Fille walls
- **Built on and built in roof tops**
- **Mobil buildings**
- Other unique solutions





SOME REFERENCES























Budapesti Gazdasági Egyetem





































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