



TECHNICAL SPECIFICATION FOR PREFABRICATED LIGHT STEEL INSULATED BUILDINGS

PLAN: Of the prefabricated light steel building, width is **10 m (single span)**, length can be multiples of 250/300 cm, column height can be **h: 4, 5 and 6 m**. Building length can be extended as many multiples of **250 cm/300 cm** as required. Dual, triple, quadruple and quituple blocks can be achieved providing that block width must be 10 m. All architectural planning, design and technical drawings are carried out with **Autocad** program, and engineering calculations are performed with **SAP 2000** program by our technical personnel. All materials used have TSE certification.

TECHNICAL DATA	Snow load	80 kg/m² (differs depending on the snow zone and altitude at the place of installation) TS 498 and TS7046
	Wind speed	102 km/hour (50 Kg/ m²) (for 0-8 m. height TS 498)
	External wall thermal conductivity	K: 0,40 Kcal/m²hC (K:0,46 W/m² K)
	Internal wall thermal conductivity	No internal wall. If required K: 0,38 Kcal/m²hC (K:0,44 W/m² K)
	Roof thermal conductivity	K: 0,44 Kcal/m²hC (K:0,51 W/m² K)
	Earthquake zone	Effective ground acceleration coefficient : Ao=0,40 (1st degree earthquake zone)
		Structural Importance Coefficient (I =1)
	APPLICABLE STANDARDS	Live load participation factor (n = 0,8) (For snow load:0,3)
		DESIGN-STRUCTURAL :TS EN 1993-1-1 , 1-2, 1-8+AC, (EUROCODE 3) , TS 11372, TS 498 ,TS 648, TS 3357,TS 6793, TS EN 1991-1-1-3 , 1-1-4 (EUROCODE 1), TS EN 1998-1 (EUROCODE 8) , Specification for Buildings to be Built in Seismic Zones – 2007
		Trusses, purlins and collar ties: Galvanized C-/U-section cold-formed profile with STRUCTURE-ROBOT compatible with the JIT production system in TS EN 10162 standard. (0,8-2 mm sheet steel thickness and 40-300 mm web gap can be modified pursuant to structural calculations and construction).
Production : Purlin and collar ties made of galvanized C-/U-section cold-formed profile manufactured in the roll forming line in accordance with JIT production system, Other metal construction, welded structure.		
Fasteners: Clinch nuts, zinc-plated bolts and nuts DIN 933-960-961, DIN 935-F,8,8, TS 1021, TS 1020, TS 1026 , TS EN 20898		
Fire resistance: TS 1263, DIN 4102, TS EN 13501-1, Fire classification of construction products and building elements - 2002		
Climate zone	Thermal Insulation : TS 825 , Thermal insulation requirements for buildings. (8.05.2000)	
	Wall insulation is suitable for 3rd climate zone (K:0,50 W/m ² K).	
	Roof insulation is suitable for 1st climate zone (K:0,50 W/m ² K).	
	Wall thickness and roof insulation thickness can be increased for other climate zones. (OPTIONAL).	

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FOUNDATION	Floor and floor covering	Concrete will be poured in accordance with concrete layout plan (foundation dimensions) delivered by ÖZGE YAPI A.Ş. and loads exerted to the foundation. Associated designs, structural calculations, and foundation and floor coverings will be carried out by the EMPLOYER . Either 20*40 / 30*50 cm pit or 100*100 concrete block will be required for the installation of columns depending on height and type of block. 25 cm thick reinforced concrete must be prepared. Building is fixed with anchor plates positioned in the pits available in the concrete floor or anchorages with template plate, which are delivered and installed to concrete blocks before. Reinforced spread foundation or mesh-reinforced foundation must be prepared.
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EXTERIOR SURFACES	Exterior surfaces	Galvanized polyurethane sandwich wall panel painted RAL 9002 with 45 mm thick polyurethane (40 kg/m ³) insulation between exterior surface of 0,50 mm thick and interior surface of 0,40 mm thick painted galvanized sheet steels, is attached to steel purlins with zinc-plated coach screws.
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CEILING COVERING		Not Available.
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ROOF (WITHOUT GUTTER)	Covering	Galvanized polyurethane sandwich roof panel painted RAL 9002 with 40 mm thick polyurethane (40 kg/m ³) insulation between exterior surface of 0,50 mm thick and interior surface of 0,40 mm thick galvanized sheet steels, is attached to steel purlins with zinc-plated coach screws. (Black sponge or polyurethane is employed in order to ensure water tightness under eaves and ridge).	
	Truss	At an interval of 250 cm , composed of variable solid welded steel truss made of I-section or weldless roof saddle trusses with C- and U-section cold formed profile manufactured from high standard galvanized sheet steel . Roof covering forms an eaves by protruding 10 cm from the wall. Gutterless.	
	Purlin	Roof	60x50x2 mm / 80*50*1,5 mm C-section cold formed profile manufactured from high standard galvanized roll sheet steel in the roll forming line (sheet steel thickness varies between 0,8 - 2 mm according to the requirements of structural calculations and construction).
		Facade	50x50x1,2 mm C-section cold formed profile manufactured from high standard galvanized sheet steel in the roll forming line (sheet steel thickness varies between 0,8 - 2 mm according to the requirements of structural calculations and construction).

LOAD-BEARING SYSTEM	NPI column is composed of C- and U-section cold formed weldless roof saddle trusses manufactured from high standard galvanized steel and C- and U-section cold formed purlins manufactured from high standard galvanized steel and equipped with wind braces. Steel bolts and nuts are used as fasteners. Multi-block steel columns are manufactured in the form of box-section from 2NPU materials. Metal gutter and PVC downpipes are used at the block joints. It is also possible to use by modifying wall thickness and width of profiles or with industrial profiles and DKP/Galvanized column-beam reinforcement and welding/screw/bolt as a result of structural calculations, when required. (On demand, manufactured from weldless roof saddle trusses with C- and U-section cold formed profile manufactured from high standard galvanized sheet steel.)
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DOOR JOINERY	Exterior door (Galvanized sheet steel)	It is manufactured as 3500*3500 mm sliding door comprising body made of
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	frame)	polyurethane wall panel, profile frame and bottom track rail. There is 900*2000 mm service door. (on demand, overhead sliding door can be installed or roll up door and sectional door can be provided)
LIGHT STRIP	There is no window. Polyester light strips are used along the long edge for lighting purposes. 80*100 cm light strips placed every 160 cm. (Window can be provided on demand.)	
PAINT	Galvanized construction is not painted since a weldless technology is employed. Components made of non-galvanized steel are coated with one layer of primer and one layer of oil paint against corrosion.	
ELECTRIC WIRING	Electric wiring is not provided.	
SANITARY PIPING	Sanitary piping is not provided.	
OPTION	It is possible to produce according to overhead traveling crane load, multi storey systems and various dimensions.	
OTHER	Foundation floor must be prepared according to the concrete layout plan provided by Özge Yapı A.Ş. EMPLOYER company shall assume the full responsibility in case it fails to observe the explanations in the concrete layout plan provided by Özge Yapı A.Ş.	

ÖZGE YAPI SAN ve TİC. AŞ. RESERVES ITS RIGHT TO MAKE CHANGES IN ALL TECHNICAL DETAILS THEREOF.

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