

## SPECIFICATION FOR PREFABRICATED LIGHT BUILDING

### External Walls 6 cm Composite HEKİM PANEL (Sheet

### Metal+EPS+FIBERCEMENT)

### Internal Walls Composite HEKİM PANEL (FIBERCEMENT+EPS +FIBERCEMENT)

**INTRODUCTION:** Prefabricated light buildings can be applied to all kinds of layout plan required in such a way that their widths and lengths will be multiples of 125 cm depending on their intended use. Panel used measures 1250mm by 2500 mm. Prefabricated light buildings are designed so as to be capable of more than one assembling and disassembling. All architectural planning, design and technical drawings are carried out with ARCHICAD 9 TR, STRUCAD (Structural Steel Detailing System Versiyon-16), STA4CAD, ÇELİKPROIV and AutoCAD programs, and engineering calculations are performed with SAP 2000 and CFS programs by our technical personnel. All materials used have TSE certification.

<b>TECHNICAL DATA</b>	Snow load	80 kg/m <sup>2</sup> TS 498
	Wind speed	102 km/Hour (50 Kg/ m <sup>2</sup> ) TS 498
	External wall thermal conductivity	K: 0,56kcal/m <sup>2</sup> hC (K: 0,65 W/m <sup>2</sup> K )
	Internal wall thermal conductivity	K: 0,59 Kcal/m <sup>2</sup> hC ( K: 0,68 W/m <sup>2</sup> K )
	Roof thermal conductivity	K: 0.39 Kcal/m <sup>2</sup> hC ( K: 0,45 W/m <sup>2</sup> K )
	Earthquake zone	Effective ground acceleration coefficient: <b>A<sub>0</sub>=0,40</b> (1.degree earthquake zone)
		Structural importance coefficient ( <b>I =1</b> )
		Live load participation factor ( <b>n = 0,3</b> )
		<b>According to intended use and type of building I =1 / 1,2 / 1,4 / 1,5 ,</b>
		Calculated as <b>n = 0,3 / 0,6</b>
	<b>APPLICABLE STANDARDS</b>	<b>DESIGN &amp; STRUCTURAL:</b> TS EN 1993-1-1, 1-2, 1-8+AC, (EUROCODE 3 ) , TS 11372, TS 498 , TS 648, TS 6793, TS EN 1991-1-1-3, 1-1-4 (EUROCODE 1), TS EN 1998-1 (EUROCODE 8 ) , IMO-01.R-01/2005, Specification for Buildings to be Built in Seismic Zones – 2007
		<b>Material:</b> DX51D+Z (~St 37) no.1311, S250GD+Z no.1325, S320GD+Z grade no.1332, S350GD+Z (~St 52) grade no.1335, standard DIN EN 10346-00, structural steel galvanized by zinc coating.
		<b>Production;</b> Galvanized cold-formed trusses, purlins and H-section steel profile columns manufactured in the roll forming line.
		<b>Fasteners:</b> Two panels are joined by fitting them into H-section steel columns, and such H profile is joined with roof trusses using zinc-plated bolts & nuts. DIN 960-961, DIN 935-F,8.8.
		<b>Thermal Insulation :</b> TS 825, Thermal insulation requirements for buildings (8.05.2000)
		<b>Acoustic insulation :</b> TS 187 and TS 854 (DIN 4109)
		<b>Fire resistance:</b> TS 1263, DIN 4102, TS EN 13501-1, Fire classification of construction products and building elements - 2002

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	Climate zone	Wall insulation is suitable for 1st climate zone (K:0,80 W/m <sup>2</sup> K). Roof insulation is suitable for ~ 2 <sup>nd</sup> climate zone (K:0,40 W/m <sup>2</sup> K).
<b>FOUNDATION</b>	Concrete will be applied in accordance with the concrete layout plan (foundation dimensions) delivered by <b>ÖZGE YAPI A.Ş.</b> Foundation design, structural calculations and covering of foundation and floor will be carried out by the <b>EMPLOYER</b> . Building will be anchored to the foundation floor with steel anchor bolts and dowels. Reinforced spread foundation or mesh-reinforced foundation must be prepared over compacted soil.	
<b>EXTERNAL WALLS</b>	Exterior panel height	<b>2500 mm</b>
	External wall dimensions/thickness	<b>1250x2500x60 mm</b>
	Exterior surface	<b>0,45 mm</b> thick S-type galvanized sheet steel where, with the aid of coil coating method, exterior surface is coated with 20 micron polyester paint over 5-7 micron primer and interior surface is coated with 5-7 micron primer (For S-type pitch, see: <a href="http://www.hekimpanel.com/wp-content/uploads/sac-deseni.jpg">http://www.hekimpanel.com/wp-content/uploads/sac-deseni.jpg</a> )
	Interior surface	<b>8 MM fibercement</b>
	Insulation	<b>~ 52 mm</b> thick polystyrene foam ( EPS ) - , <b>fire class B1</b>
<b>INTERNAL WALLS</b>	Interior panel height	<b>2500 mm</b>
	Internal wall dimensions/thickness	<b>1250x2500x60 mm</b>
	Surfaces	8 MM fibercement
	Insulation	<b>~ 52 mm</b> thick polystyrene foam ( EPS ) - , <b>fire class B1</b>
<b>CEILING COVERING</b>	Entire space	<b>6 mm fibercement board - Class A1 (Fireproof) or painted plaster board"</b>
	Insulation	<b>80 mm</b> glass wool blanket
<b>ROOF</b>	Covering	<b>0,45 mm</b> thick unpainted galvanized sheet steel with <b>27 x 200 mm</b> pitch depth. <u>Black sponge is used under eaves and ridge for isolation.</u>
	Purlin	<b>Angle omega-section (80x50x0,9 mm)</b> profile cold formed from <b>galvanized rolled sheet steel</b> in the roll forming line. (wooden purlins are employed for the roofs to be covered with Onduline®)
	Truss	Located at an interval of <b>125 cm</b> , steel truss designed specially with exterior and interior profiles and manufactured from high standard galvanized rolled sheet steel (thickness of sheet steel changes between 0,8-2 mm according to structural calculations and construction requirements) <b>150x300 mm</b> PVC louver on the face of exterior trusses for ventilation.
	Eaves	20 cm PVC eaves. <b>150x150 mm</b> PVC louver at eaves to avoid bleeding.
	Gutter and downspouts	PVC GUTTER
<b>LOAD-BEARING SYSTEM</b>	Composed of <b>H-section columns manufactured from (galvanized sheet steel)</b> and roof trusses from <b>high standard galvanized roll sheet steel</b> in the roll forming line. 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.	
<b>WALL JOINTS</b>	<b>Galvanized</b> sheet steel H-profiles manufactured in the roll forming line are bolted to trusses or frames. <b>Exterior face of H profiles employed for joining external walls are covered with PVC sheath.</b>	

CEILING JOINTS	6 mm Fibercement ceiling material is joined using such joining elements as galvanized sheet steel and PVC omega profile, PVC sheath and painted aluminum T-profile. <b>(in order to avoid corrosion and bleeding)</b>			
ACCESSORIES	Edge omega, omega over panel, face edge coating material, face coating material, window rough bucks, coating material located under the eaves are made of PVC (in order to avoid corrosion and bleeding).			
	NOTE: Edge omega, omega over panel, window rough bucks, and face sheet can be metal according to building construction.			
DOOR JOINERY	Exterior door:	External dimensions <b>845/1960</b> mm steel door (Both sides with chipboard, EPS filler inside 0,50 mm thick prepainted RAL9002 galvanized sheet steel film coated with COIL COATING system.)		
	1,2 mm galvanized sheet steel frame with oven-cured paint			
	Interior door:	External dimensions <b>840/1960 mm</b> laminated MDF panel door, (wooden carcass, kraft filler) leaf thickness : <b>42 mm</b>		
	1,2 mm galvanized bare sheet steel frame			
	Wet area door	External dimensions <b>720/1960 mm</b> laminated MDF panel door, (wooden carcass, kraft filler) leaf thickness: <b>42 mm</b>		
	Door lock and handle	Exterior and interior door locks are cylindrical (interior door locks of housing are mortise locks) (ITO or KALE brand), door handles are brass or grey metal.		
WINDOW JOINERY	Window (PVC frame)	<b>1205/1000 mm</b> PVC handle		
	Transom window (PVC frame)	<b>1205/500 mm</b> PVC handle		
GLASS	Double glazed	<b>4+9+4 mm –</b>		
PAINT	Exterior surfaces	0,45 mm thick prepainted galvanized sheet steel with COIL COATING system. <b>RAL 9002</b>		
	Interior surfaces and ceiling	2 layers of plastic based indoor paint-		
	Other	No primer is required for galvanized cold formed truss, purlin and H profile since weldless technology is used.		
	Non-galvanized metal components	1 layer Rapid primer+ exterior surfaces 2 layers of oil paint -		
ELECTRIC WIRING Surface mounted	Cable	(NYM ,220 Volt , 50 Hz.),		
		PVC cable conduit (16 mmx25 mm ) water-resistant cable inside,		
		Socket outlets 3X2.5 mm² NYM, socket lines 4X2.5 mm² NYM cable		
		Lighting outlets 2X1.5 mm² NYM, lines 3X1,5 mm² NYM cable ,		
	Lighting fixtures	Normal area	Circular fluorescent (for housing) , 2*36 W -1*36 W- 2*18 W - 1*18 W- Fluorescent TMS Fixture, Fluorescent lamps	
		Wet area	Glop –IP 44,	
		Above exterior door		
	Sockets, switches	Damp places		
	Fuse, fuse boxes	Automatic fuses		



		PVC Fuse boxes	
	Power panel, Weak current installations (Telephone, TV, data), Mainline connections:	<b>Will be provided by the Employer company.</b>	
<b>SANITARY PIPING</b> <b>Surface mounted</b>	Sanitary wares/mixers	Wash basins	<b>40x50 cm wall-hung type, KÜTAHYA SERAMİK brand</b>
		Wash basin and shower taps	Taps are mounted on the wall in cold water installed wash basins, and taps are mounted to the wash basin in hot water installed wash basins
		Toilet	Toilet with plastic cistern (European WC) Squat toilet (bidet nozzles)
		Shower tray	80 cmx80 cm Acrylic,
		Kitchen sink	<b>50/100 cm</b> sink is made from chrome material, double cabinet from melamine coated chipboard at the bottom. Upper cabinet is not available. 100 cm kitchen sink cabinet.
	Pipes	Fresh water	PPRC -
		Sewage water	PVC -
<b>OTHER</b>	<b>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.</b>		

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

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