
 **Home** designs and produces various wood houses of two stories or three stories - for apartments, villas, holiday resorts and business offices. The advantages of wood houses produced by  Home can be found as perfect stability, heat and sound insulation, cost saving and environmental friendly. They provide their clients with multiple choices and short time of delivery as well as competitive prices.



**FOLLOWING IS MAKING A MOCK UP DISPLAY HOME**






## Computer controlled product line

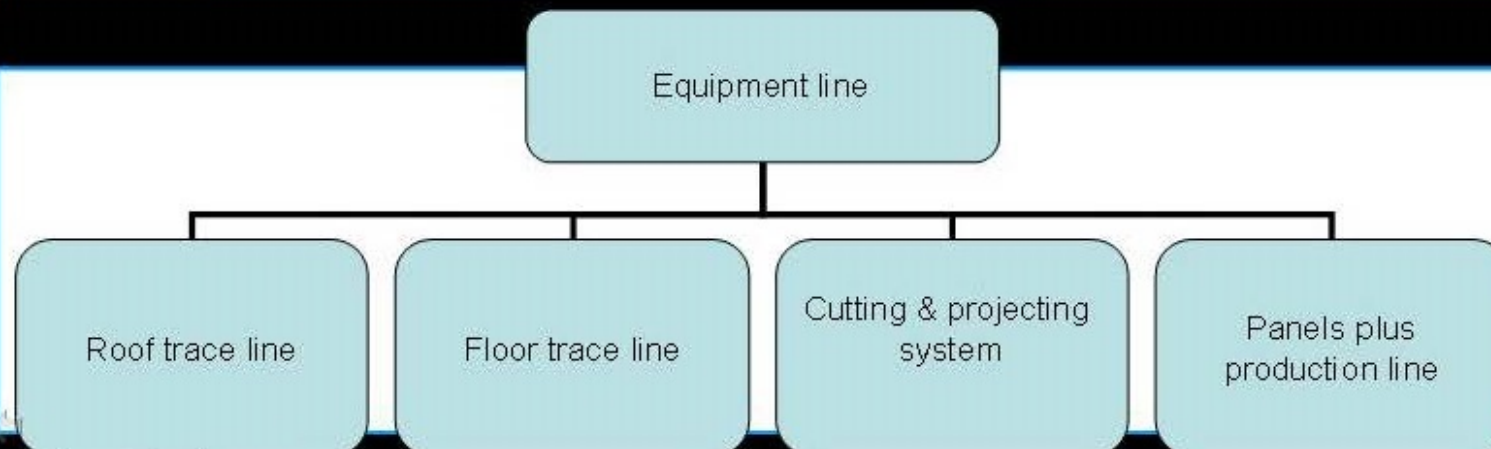


### Software

CAD, CAM and Laser projection are used through production activity in  Home. Quality of production is guaranteed by fully automatization. All timber components are designed and engineered strictly by MiTek 20/20TM software insuring stability and durability of products.

### Hardware

Raw materials are all introduced from the leading companies around the world. Such as SPF dimension lumbers: NLGA & BTR, from Canfor Canada; OSB: EN300/OSB3, from Kronoply Germany; Metal Connectors from Mitek Australia.





## Wood construction- Walls exterior/interior & Roof structure Mockup house foundation laid

Production-Day 1

### All wall structures and roof structures are finished in 2 hours

- The **Mi-Tek** drawing is inputted into computer to calculate the amount and dimensions of the wood material needed
- The wood was cut by computer controlled program which minimized the error within 2mm
- Automatic printer jetted the code on the wood to simplify the later on joint and erection work
- High efficiency of daily production makes the volume-produce to be reality



Foundation laid



# Wood construction – walls exterior / interior

## Production, Day 1

### Production chain – Sandwich- elements for walls (outside /inside)

- All elements for the wall construction had been cut and assembled within 1 day.
- All wood which is built-in is handpicked and got the **CMSA Certification**, *OK House sources the wood from Canada, i.e. it got the CMSA Certification, this certificate is conform to FSC (required by CP)*
- All elements are built accurately and according to Canadian standards\*.



#### \* Deviation from requirements

Dimensions asked by CP:

- **16 cm exterior / 7.5 cm interior wall**  
(K-value: 2.5 W/m<sup>2</sup>)

Canadian standard wood size:

- **18.6 cm ext.(or 13.4 cm) / 8.9 cm internal wall**  
(K-value: W/m<sup>2</sup>)



## Foundation / Wood construction Wall erection

Production-Day 2  
Production Day-3

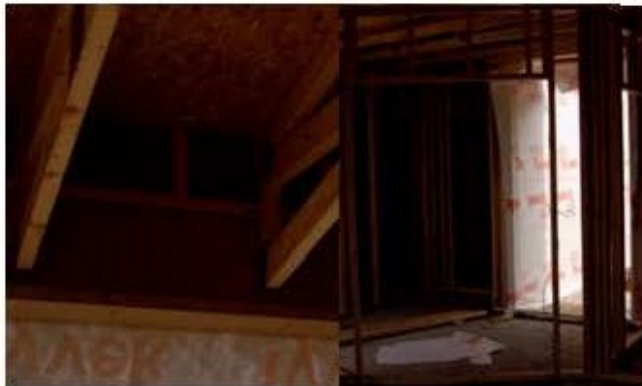




## Wood construction – erection walls

Day 6

11 a.m.



Day 1-6



Progress  
within 5 days...



# Wood construction – erection roof (rafter)

Day 7



11 a.m.



## Composition wall element

asked by CP:\*

- Plaster board, 12.5 mm
- OSB plate, 18 mm
- Vapour barrier
- Wood constr. 16 cm + insulation WLG 035
- Chipboard, 19 mm
- Vapour barrier
- Battens
- Facade Werzalit/plaster base board ,

## \* Deviation from requirements

- Plaster board, 12.5 mm
- OSB plate, 18.3 mm
- Vapour barrier
- Wood constr. 18.4 cm + insulation GB/ T17795
- OSB, 18.3mm
- Vapour barrier
- Battens
- Facade (alternative) wood. 11cm/2cm



# Wood construction – erection roof (rafter) details

Day 7

11 a.m.



6 p.m.



*Composition roof construction asked by CP:\**

- **Bitumen**, 2 layers
- **Insulation**, 16 cm
- **Boarding (OSB)**, 16 cm
- **Wood constr.** 60/200
- **Battens**, 4,25 cm
- **Plaster board** 12.5 mm

*\* Deviation from requirements*

- Bitumen, 2 layers
- Insulation\*\*, 16 cm
- **Boarding (OSB), 18,3 cm**
- **Wood constr. 38/235**
- Battens, 4,25 cm
- Plaster board 12.5 mm



## Roof structure

Production-Day 4 - 5



*The degree of was achieved by the wood roof structure (OSB) itself instead of the hard insulation material cover on top of the .*



## Wood construction – Pergola

Day 9



11 a.m.





## Wood construction – not conform to requirements

!!!!



Pergola – not conform to planning





## Facade – not conform to requirements

!!!!



## Further details – not conform to planning





## Certifications / Brands

## Bill of material

### Wooden construction (wall elements)

- Plaster board, 12.5 mm
- OSB plate, 18.3 mm
- Vapour barrier
- Wood constr. 18.4 cm
- Facade wood: Scotch Pine
- Insulation (fibre-glass)

### Brand

Knauf  
OSB  
SBS  
SPF  
Cogent  
SBS  
Owens Corning

### Brand

Germany?  
Germany  
USA  
Canada  
China  
USA  
USA

### Roof

- Insulation, 16 cm / **PUREN will be advised by DTS/CBC**



### CP specifications regarding Insulation (U-value)

Facade > 2,5 W/m2K

Roof = 3.0 -3.5 W/m2K

Glazing < 1.2 W/m2K (*insulating HR++*)

Aluminium frame < 2.4 W/m2K

Glazing within Facade/roof incl. Aluminium frame: 1,6 W/m2K





## Review wooden construction

## Deviations Cogent Home

### Result:

#### Configuration of wood construction, roof

#### Deviations of CP configuration which can be disregarded:

- **Boarding OSB** (Canad. size diff. + 2.2 cm) 16 cm are requested / 18.2 cm can be delivered

*Note: diff. in scale might be disregarded.*

- **Eaves gutter**: there is no technical CP specification,  
*OK House will build conform to pictures CP/NL, (Material Zinc).*

#### Deviations of CP configuration which has to be discussed with CP:

- **Wood construction (rafter)** - CP requirements: 60/200 mm, Canadian standard size: 38/235 mm

*Note: diff. -2.2 cm/+3.5 cm,  
as far as we would assess the situation, statically it will be almost the same.  
But finally this should be checked by a structural designer!*



### Windows / Doors

Due to the fact, that we have not seen any door or window sample, which had been conform to the CP requirements, yet – unfortunately we can not give any information about structure and design specification.



## Review I (wall elements)

## Deviations Cogent Home

### Result:

Configuration of wood construction

**Cogent Home** would be able to perform a wooden construction 100% of the type, which has been asked by CP specification.

There would be only minor variances in component thickness resulting from usage of alternative brands for several materials.

Deviations of CP configuration which can be disregarded:

- OSB plate (Canad. size) diff. +0.3 mm. (*irrelevant towards construction*)

Deviations of CP configuration which has to be discussed with CP:

diff. of Canad. standard wood size (diff. **+ 2.2 cm**)

*Note: An adaptation of wood from 18.2 cm to 16 cm are out of scale, additionally a larger scale will influence the insulation value, positively.*



Suggestion: modification of configuration external wall

### • Replacement of chipboard by OSB plate

*Note: for technical reasons concerning shipment (weight, robustness) and long-life cycle, we would advise to replace the required chipboard by OSB.*

*Nevertheless OK House is able to order the required Chipboard in China (diff. dimensions - 0.7 mm, which might be disregarded)*





## Materials to be used for the mockup house

### Structure material



Wood  
2 X 6 for mockup  
2X 8 for shipment



OSB (imported from Canada)



Insulation



Plaster board



Foil



## Materials to be used for the mockup house

### Decorating material



Other three samples for choice

### Floor- room wood



Floor-bathroom tile



Floor-pergola tile



Pipe



## Materials to be used for the mockup house

### Decorating material



Wall facade



Doors



Chimney bricks

Not available to provide other materials photo,  
but samples will be shown at site.



