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BUILDER'S FINISH OF MAGAHOMES HOUSES - DEFINITION

BUILDER'S FINISH is a term used for buildings with:

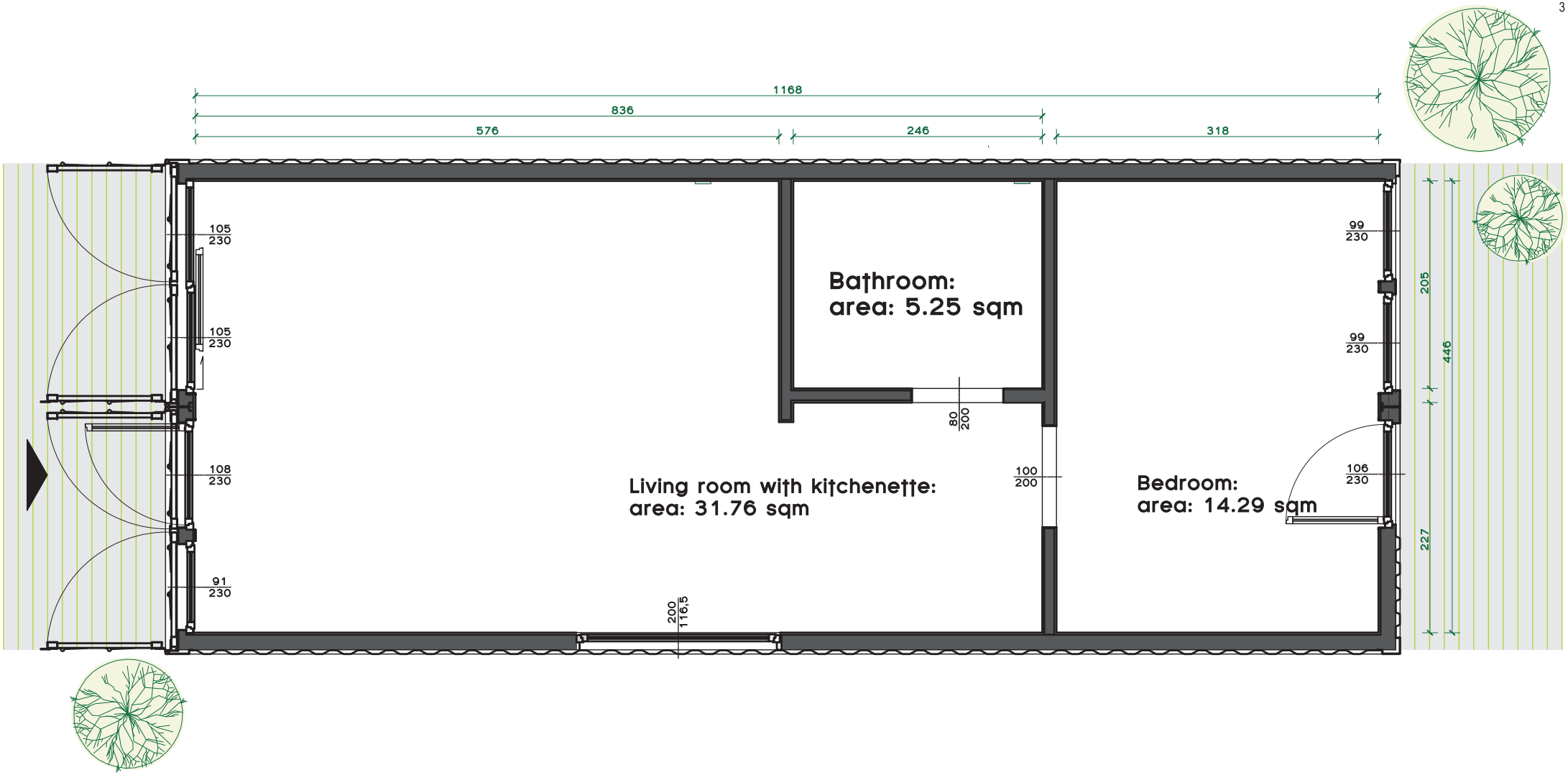
- **laid floors** (without skirting boards)
- **walls made of Fermacella boards, covered with fiberglass wallpaper**
- **the walls and ceiling are primed and painted with 2 layers of white paint**
  or
- **walls / ceiling made of four-rabbet wooden boards, thickness: 12 mm**
- **walls / ceiling lacquered with clear varnish**
- **water and sewage installation** - instantaneous water heater installed
- **electrical system:** with sockets
- **heating installation**
- **ventilation unit**
- **no kitchen equipment** (only installation prepared for it)
- **no bathroom equipment** (only installation prepared for it)
- **no air conditioners** (only installation prepared for it)
- **no internal doors**

We treat the builder's finish as a pre-finished state of rooms that does not yet allow residence and use of the building. The interior of the house should be finished by the purchaser.

IMPORTANT!
1. The facade of the container is not provided (the container is only painted / protected against corrosion).
2. Terraces / landings are not provided.

maga homes

VERSION A with one bedroom – builder's finish



LIVING ROOM WITH KITCHENETTE	31,76 sqm
BEDROOM	14,29 sqm
BATHROOM	5,25 sqm
TOTAL area	**51,30 sqm**

DIMENSIONS of a SINGLE 40-foot HC container:
EXTERNAL dimensions:
External dimensions of the 40-foot High Cube container:
length: 12.2 m; width: 2.4 m; height: 2.9 m.

INTERNAL dimensions:
Internal dimensions of the 40-foot High Cube container:
length: 12 m; width: 2.35 m; height: 2.7 m.

The Magahomes house is built of two 40-foot containers of HC.

LIST OF ROOMS:

1. Living room with kitchenette: area: 31.76 sqm
2. Bedroom: area: 14.29 sqm
3. Bathroom: area: 5.25 sqm

Total area: 51.30 sqm

CONSTRUCTION:
In Magahomes houses, we strengthen the container's body by joining steel poles with the container frame at window or door openings and along of the residential unit (2 pieces).
The construction of the container is additionally reinforced with two upstand beams located transversely on the roof and screwed to the frame of the container.
The exterior of Magahomes houses is painted, after mechanical cleaning, with anti-corrosion paint, intended for painting containers.

CONNECTION OF CONTAINERS:
The containers are bolted together inside with two corner cubes (upper and lower). The advantage of such connectors is completely invisible assembly elements. The roof part is very important when joining containers together - in Magahomes houses, the roofs do not leak in the joints due to the use of a special roofing membrane.

INSULATION
FLOORING insulation:
In Magahomes houses we use rigid PUR boards (thickness: 10 cm) to insulate the floor.
This type of insulation has excellent thermal, waterproofing and acoustic properties. Its additional advantage is its resistance to pathogens, which include fungi, insects and rodents.

Layers of the floor (from top to bottom layer):
- OSB layer; thickness: 12 mm
- original floor in the container: plywood; thickness: 30 mm
- polyurethane insulation - rigid PUR boards; thickness: 100 mm
- galvanized sheet with anti-corrosive layer (protects the insulating layer of the floor)
-

Heat transfer coefficient for FLOOR:
U=0.21 (WT 2021 - Umax = 0.30 w/mkw*k)
[WT 2021 is a polish norm regarding technical conditions planned for 2021]

FLAT ROOF insulation:
For the insulation of the roof in Magahomes houses, exterior polyurethane insulation was used in the form of rigid 200 mm thick PUR boards.
After fitting the insulation on the whole surface of the roof, a special membrane is placed on it and then fixed with screws to the upper part of the container. The screws are hidden under a special masking which also acts as a gutter (mounted around the house).
This solution not only protects against water (rain, snow), but also allows easy disassembly (and reassembly) of the roof covering when moving the container.
Inside the house, rigid PUR boards with a thickness of 20 mm are laid over the ceiling and covered with a finishing material.

Roof insulation layers (from inside the container to the outside):
- wall finishing material
- polyurethane insulation - rigid PUR boards; thickness: 20 mm
- metal sheet (outer wall of the container); thickness: 2 mm
- polyurethane insulation - rigid PUR boards; thickness: 200 mm
- membrane (protects against snow and rain, etc.)
-

Heat transfer coefficient for the FLAT ROOF:
U=0.11 (WT 2021 - Umax = 0.15 w/mkw*k)
[WT 2021 is a polish norm regarding technical conditions planned for 2021]

Insulation of EXTERNAL WALLS:
For the insulation of external walls of Magahomes houses we use polyurethane insulation in the form of PUR rigid boards with a thickness of 150 mm.
This type of insulation has excellent thermal, waterproofing and acoustic properties. Its additional advantage is its resistance to pathogens, which include fungi, insects and rodents.

External wall layers (from inside the container to the outside):
- wall finishing material
- polyurethane insulation - rigid PUR boards; thickness: 150 mm
- metal sheet (outer wall of the container); thickness: 2 mm

Heat transfer coefficient for EXTERNAL WALLS:
U=0.15 (WT 2021 - Umax = 0.20 w/mkw*k)
[WT 2021 is a polish norm regarding technical conditions planned for 2021]

Interior WALLS:
We use mineral wool 100mm thick to insulate the internal walls of the Magahomes house.

WALL FINISHING INSIDE THE CONTAINER:
In Magahomes houses, we use two types of materials to finish the walls:
- Fermacell boards: 12.5mm thick
- wooden boards, four-rabbet; thicknesses: 12mm

WINDOWS and OUTER DOORS:
We use window and door carpentry made of PVC (the surface of the outer door is entirely glazed). The type of the windows is Aluplast AS 4000 Classic.

Within one room, selected windows are equipped with manual pressure diffusers with smooth adjustment / AirVent SM 1000 4000, white /.

FLASHING of window and door openings (external)
The flashing is made of galvanized aluminium sheet. The individual elements are screwed to the container's shell. Because the window openings are arranged symmetrically to the corrugated sheet of the container, both assembly and disassembly proceed quickly and efficiently.

UTILITIES in Magahomes houses:
The utilities included in the project - connected to a residential unit - are water and electricity. The sewage must be led to a sewer or a septic tank.

ELECTRICAL installation:
Lighting installation and installation of 230V sockets. The electrical installation is flush-mounted.

Magahomes houses are mobile, therefore, the installation has been divided into units for independent electrical circuits. The circuits have their own fuse boxes (one for each container). In addition, an electric meter was installed in one box. The circuits are connected, but they are easy to undo, so once the house is put in a new location, they can be clipped again without any problem.
Important! Work on the electrical installation must be carried out by a qualified electrician.

HEATING installation:
In Magahomes houses, we use an electric floor heating system using a TF-310TL heating foil, which we lay directly under the floor panels.
An unquestionable advantage of this solution is the lack of hanging heaters, which gives the freedom of arrangement and a short time needed to heat the room. The temperature is regulated by a thermostat.

Underfloor heating is distributed throughout the house (except the bathroom).

Layer system in underfloor heating:
- PVC floor panel
- vapor barrier foil
- TF-310TL heating mat
- insulation underlay: 5 mm
- OSB board 12 mm
- original floor of the container - plywood; thickness: 30 mm
-

The bathroom has a hanging electric heater ("ladder" type).

VENTILATION INSTALLATION:
Air movement is ensured by diffusers mounted on the window frames, air extraction is provided by mechanical fans (installed at the kitchenette and in the bathroom). The windows can be opened, so they also perform air exchanging function.

The air from inside the container is led out through fans, through chimneys mounted on the side wall of the container. The chimneys can be dismantled for transport.
Within one room, selected windows are equipped with manual pressure diffusers with smooth adjustment / AirVent SM 1000 4000, white /.

Electric fan:
model: BLAUBERG QUATR125CH FI 125 mm,
colour: white;
amount: 2 items;
fan power: 16V;
efficiency: 167 m3 / h.

WATER-SEWERAGE system:

The Magahomes house has been equipped with a flush installation of water and sewage.
The water installation was made of PERT-Al-PERT pipes.
The sewage system is made of PP pipes.

The water and sewage outlet is located in the outer wall of the container.
The water supply pipe on the section from the container to the depth of 1m is heated electrically by a self-regulating heating conduit (25W/m). The whole installation is powered from an electrical switchboard located inside the residential unit.
Pipes led outwards are insulated with foam and mineral wool.

The water is heated by an electric water heater.
Water heater:
Model: Kospel PPE2 9/12/15 electronic - Electric instantaneous water heater 9/12/15 kW
amount: 1 piece