



## Technical Data Sheet

Cellar 200x200

Natural Fridge®



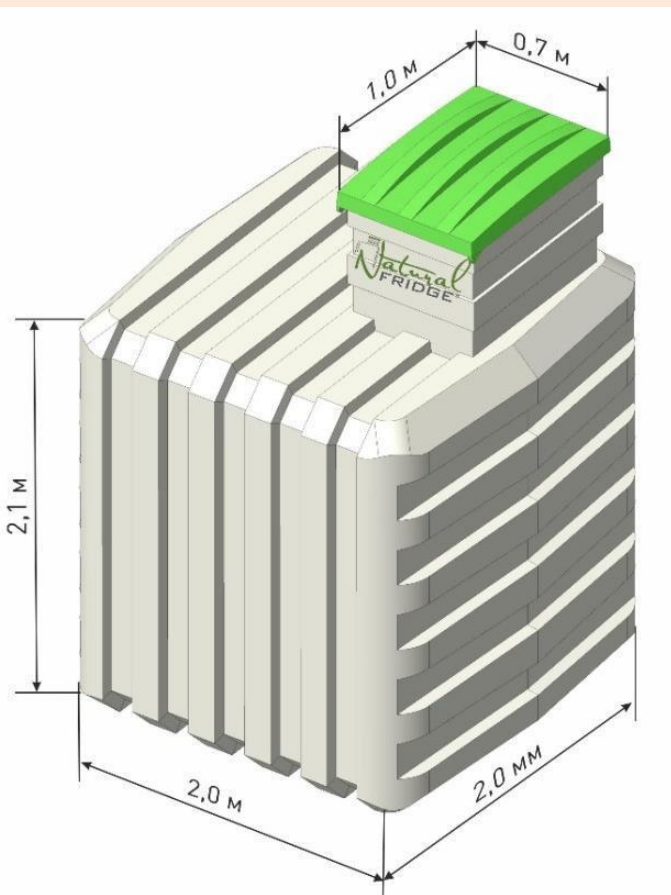


This card contains a description of the basic technical characteristics of the 200x200 Cellar Natural Fridge made of plastic with a top entrance, as well as the method of installation and use.

Plastic cellars are intended for storing vegetables, fruits, liquids, beverages, and various types of packaged food. The cellar is delivered ready to be embedded in the ground. The cellar is made of food-grade polyethylene as a monolithic structure in rotomoulding technology. It does not require additional sealing.

### ATTENTION!

Installation of the 200x200 cellar is only allowed at a low groundwater level. (not higher than 1.7 m from the surface of the ground).



Dimensions 200x200 cm,  
Height 260 cm  
Volume 7.2 m<sup>3</sup>  
Weight 770 kg  
Entrance dimensions 70 x  
100 cm,  
Shelf width 18-35 cm, Shelf  
area 5.9 m<sup>2</sup>

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Dimensions may vary by  $\pm 3\%$  due to different shrinkage of polyethylene.

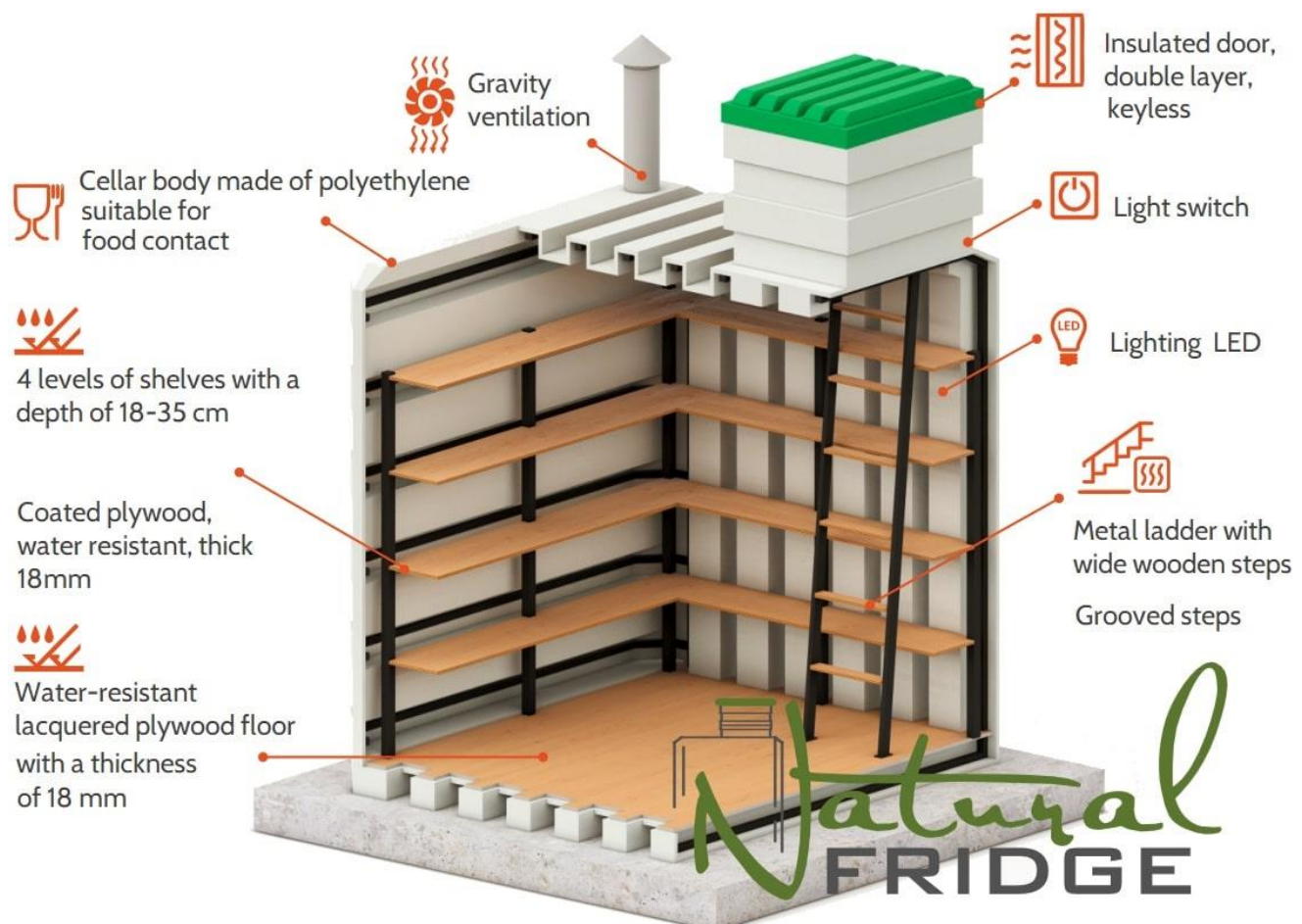
# Equipment

## Interior equipment:

1. Shelves made of waterproof plywood - 4 rows
2. Floor made of waterproof plywood
3. Stairs - 1 pc
4. Supply ventilation - 1 pc
5. Exhaust ventilation - 1 pc
6. Double cover (lid) - 1 pc

## Additional equipment:

1. LED lighting - 1 pc,
2. Weather station - 1 pc.





## Assembly and operation instructions

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The body of the cellar is made of food-grade polyethylene reinforced with ribbing. Inside the cellar, a strong steel frame is installed, which also serves as reinforcing ribbing. The object does not require additional sealing or protection against corrosion.

The lower part of the cellar must be buried at a depth of about 250 cm below the ground surface. At such a depth, very large soil pressure forces act on the cellar body. These forces can be even higher in the case of a high groundwater level or in the case of clay soils, which may move during freezing. Therefore, the installation of the cellar must be carried out in accordance with these instructions. Thanks to this, the aesthetic and practical cellar will serve for many years.

**Before starting the installation of the cellar, it is necessary to determine the groundwater level and the type of soil on site.**

### Required materials

Materials needed for the installation/assembly of the cellar 200 x 200:

- Semi-dry (dry) ready-mix concrete B15-B25, 4-6 m<sup>3</sup>
- Reinforcement bars 10-12 mm, 30 linear meters
- Styrofoam for foundation insulation, 5 cm thick - 16-20 sheets
- Underground cable 2x2.5mm<sup>2</sup> or 2x4mm<sup>2</sup> - from the earth cellar to the connection point to the 220V network.
- It is recommended to use a 20mm polyethylene pipe for the underground cable.
- Synthetic straps with a permissible load of 4t and a length of 7 m - 2 pieces or steel cables with a polymer coating with a diameter of at least 10 mm and a minimum length of 7 m - 2 pieces.

### Excavation dimensions

The dimensions of the excavation for the cellar installation should be 20 cm larger than its width and length around the entire perimeter - at least 240 x 240 cm at the bottom part. The depth of the excavation should be 265-270 cm, so that after placing the cellar on a concrete slab or dry concrete base,

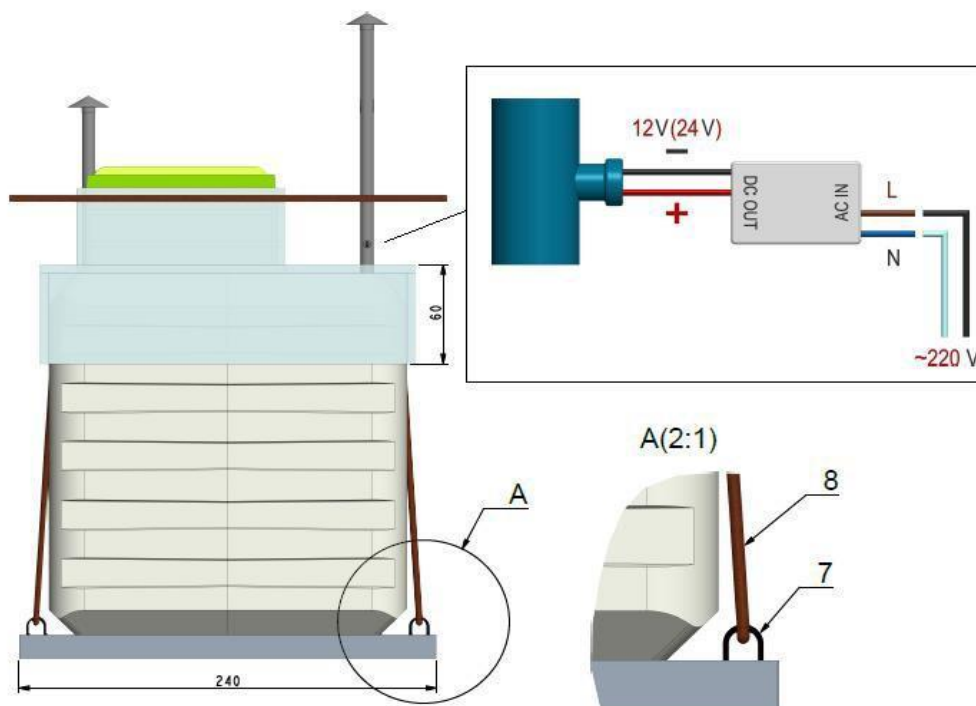




In sandy soils and at a low groundwater level (at least 2.5 m below the surface), it is allowed to install the cellar on a layer of dry concrete 10-15 cm high with reinforcement. In clay soils or at a high groundwater level, a reinforced concrete slab with a minimum size of 240 x 240 cm and a thickness of 15 cm, containing handles for straps, should be made at the bottom of the excavation.

We position the cellar on a previously poured concrete slab at the bottom of the excavation and secure it with straps (not included in the equipment). The cellar should be centered on the concrete slab. Then, we attach it to the slab with straps or rope and surround it with dry concrete on all sides. Each layer, 30-40 cm in height, should be moistened with water so that the dry concrete hardens faster. The body of the cellar should be surrounded by dry concrete up to a height of 1 m from the bottom. Then, the cellar is covered with sand.

The thickness of the dry concrete around each wall of the cellar should be at least 20 cm.



### Assembly of the upper part

To reduce temperature fluctuations inside the cellar, it is recommended to use thermal insulation material (extruded polystyrene - foam board) with a thickness of 5-10 cm (Styrodur or similar) on the upper part of the cellar (side surfaces of the vertical entrance and the upper surface of the cellar body), as well as around the chimney and side surfaces of the cellar body to a depth of 60 cm from the upper



plane of the cellar body. The thermal insulation should be covered with geotextile.

Ventilation pipes must be extended by 50 cm above ground level for the inlet air (which supplies air to the lower part of the cellar) and 100-150 cm for the exhaust air pipe (removes air from the upper part of the cellar) and equipped with ventilation caps (they are included in the cellar set).

In winter, at very low temperatures (below  $-20\text{ }^{\circ}\text{C}$ ) and in summer during heat waves (above  $+30\text{ }^{\circ}\text{C}$ ), it is necessary to limit the flow of cold and hot air (close the air supply). It is also recommended to insulate the exhaust pipe (to avoid condensation in the pipe).

### **Attention**

When backfilling the cellar body with soil, construction machinery must not be used within a distance of less than 1 m from the body. Vehicle movement within a distance of less than 1 m from the cellar along its entire perimeter is prohibited.

Within a few weeks after installation, the polyethylene walls of the cellar will be pressed against the frame and shelves of the cellar by the pressure of the earth, and at greater distances between the frame elements, the walls may slightly bend inward. In case of large temperature differences on the entrance doors or walls, some condensation may occur. The condensation evaporates after some time and does not need to be specifically removed. At very low temperatures, frost may appear on the inside of the entrance flap. If this phenomenon occurs frequently, it is recommended to insulate the door from the inside with insulating foam.

## **Warranty Conditions**

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During the warranty period, the buyer has the right to free repair of the product in case of defects resulting from manufacturing errors.

The warranty covers the functionality of the equipment, the quality of food material, floor and shelves, mechanical and welded connections.

The manufacturer's warranty is exclusively limited to manufacturing defects and does not cover the following cases:

- Normal wear and tear of all parts and components, natural aging, as well as damage to paint and surfaces caused by normal use and environmental influences, including aggressive substances such as atmospheric conditions, industrial pollution, chemicals, plant juices, stones, salt, etc.



- Minor geometric deviations that do not affect the quality of plastic cellars or their components (e.g., slight deviations from structural dimensions caused by the characteristics of rotationally molded products);
- Damage caused by natural disasters, fires, household factors, and other force majeure;
- Damage caused by third parties, including during delivery or installation of the product, which was carried out contrary to the assembly instructions for plastic cellars;
- Damage and deformations of products caused by changes in geometric dimensions, which occurred after the completion of installation works and due to the product's design;
- In case of corrosion caused by scratches and paint chips on frames as well as various parts and connections.

The warranty expires if the product is repaired or an attempt to repair is made by persons (companies) without prior consultation with the manufacturer.

**Warranty period: 24 months.**

For some components (LED lighting, weather station) a 1-year warranty is provided.

Expected lifespan: at least 50 years.

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**Product manufacturer**

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