



Technical Specifications of the Product

Cellar 200x500

Natural Fridge®





This technical specification contains a description of the basic technical characteristics of the Cellar 200x500 Natural Fridge made of plastic with a side entrance, as well as its method of installation and use.

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



Dimensions 200x500 cm Height 270 cm

Volume 18.3 m³ Weight 1850 kg

Entrance dimensions 90x130 cm Shelf width 30-35 cm Shelf area 13.1 m²

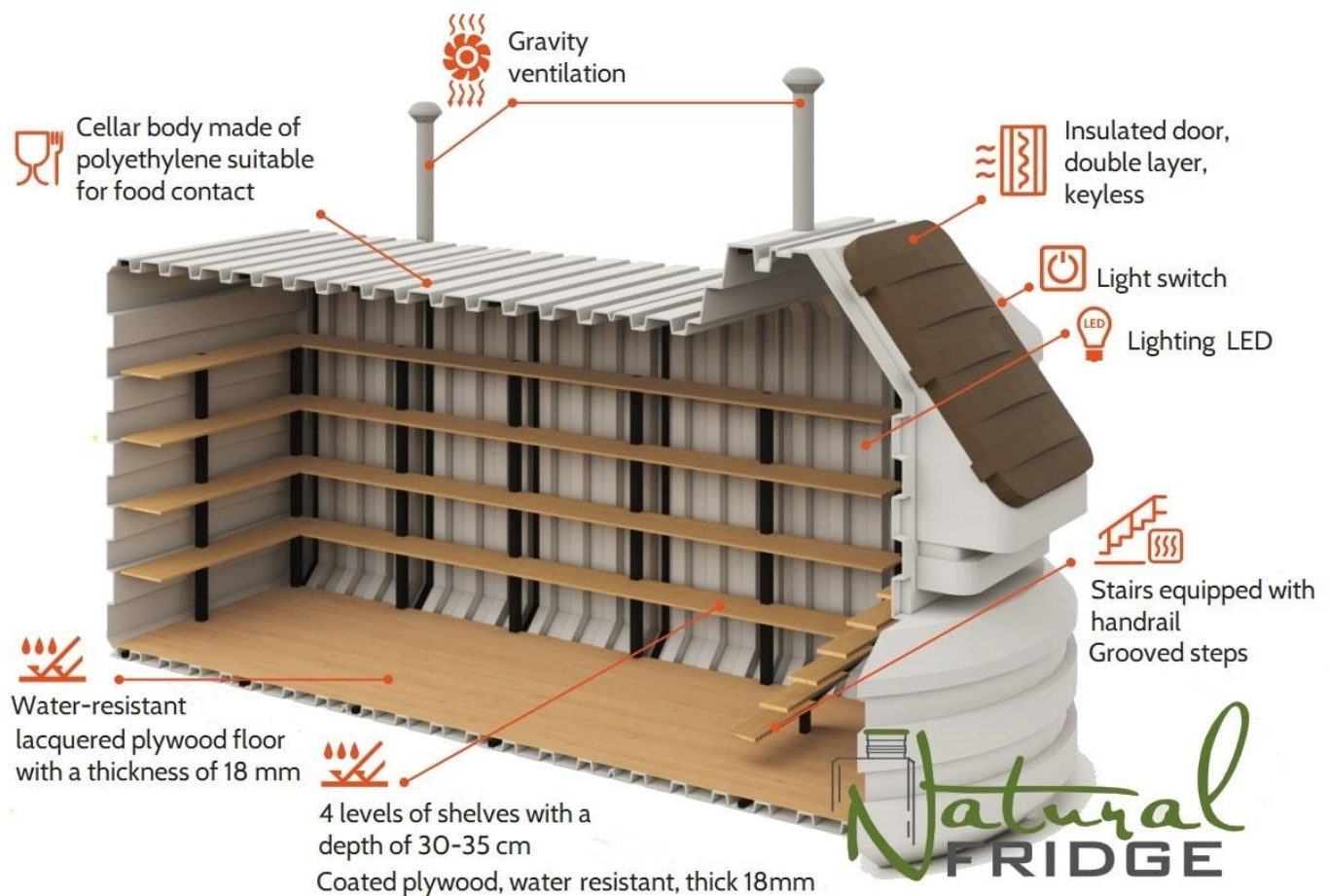
Dimensions may vary by $\pm 3\%$ due to different shrinkage of polyethylene.



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 (flap) - 1 pc
7. LED Lighting - 1 pcs,
8. Weather Station - 1 pcs.





Installation and Operation Manual

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

The lower part of the cellar should be buried at a depth of about 155 cm below the ground surface. At such depth, very large soil pressure forces act on the cellar body. These forces can be even higher in the case of high groundwater levels 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 of the Cellar 200x500:

- Ready mix of semi-dry (dry) concrete B15-B25, 6-8 m³
- Reinforcement bars 10-12 mm, 130 linear meters
- Styrofoam for foundation insulation, 5 cm thick - 45-50 sheets
- Grounding wire 2x6mm² - from the cellar to the connection point to the power network (220V /24V)
- The use of a 20-millimeter polyethylene pipe for the underground cable is recommended.
- Synthetic belts with a permissible load of 4-5 tons and a length of 7 m - 3 pieces or steel cables with a polyethylene coating of at least 12 mm thickness and a minimum length of 7 m - 3 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 540 cm at the bottom part. The depth of the excavation should be 165-170 cm, so that after placing the cellar on a concrete slab or dry concrete substrate, the lower edge of the hatch cover is 5-10 cm above the ground level. This is to prevent rainwater or meltwater from getting inside the cellar. The walls of the excavation should be vertical and maintain the correct dimensions throughout their height. This will greatly facilitate the

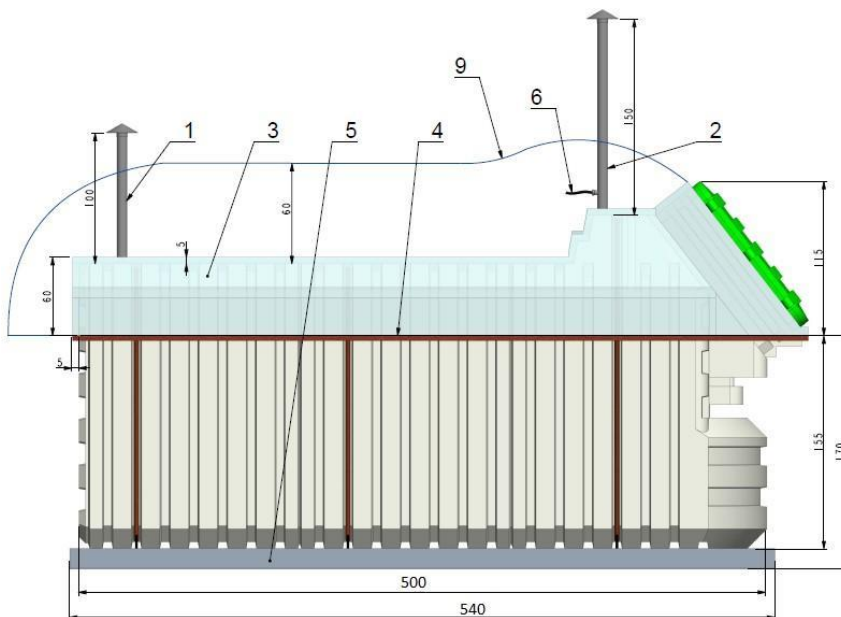
construction of cellar walls with dry concrete.

Installation

In sandy soils and at a low groundwater level (at least 1.5 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 should be made at the bottom of the excavation, with a minimum size of 240 x 540 cm and a thickness of 15 cm, containing handles for straps.

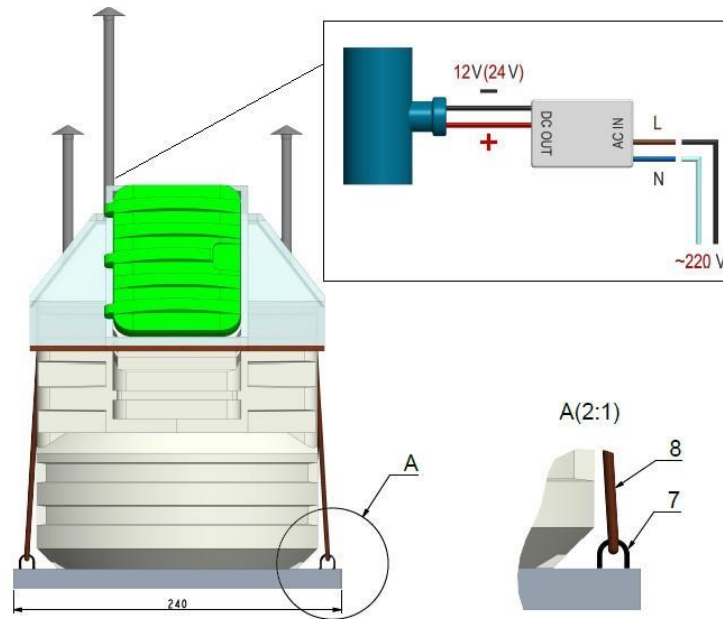
We place the cellar on the previously poured concrete slab at the bottom of the excavation and secure it with straps (not included in the equipment). The cellar should be centered on the concrete slab. Then we secure it to the slab with straps or rope and surround it with dry concrete on all sides. Each layer, 30-40 cm high, should be moistened with water so that the dry concrete hardens faster. The body of the cellar should be surrounded by dry concrete to a height of 0.6-1 m from the bottom. Then the cellar is covered with sand.

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



Schematically

1. Ventilation intake pipe
2. Ventilation exhaust pipe
3. Styrofoam insulation
4. Ground level
5. Concrete slab
6. LED power cable
7. Strap holders
8. Straps
9. Earthen mound



Assembly of the top 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 (Styrofoam or similar) on the top part of the cellar (side surfaces of the entrance and the top 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 top plane of the cellar body. Thermal insulation should be covered with geotextile.

Ventilation pipes must be extended by 50 cm above ground level for the inlet pipe (which supplies air to the lower part of the cellar) and 100-150 cm for the exhaust 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 warm 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 soil, and



at greater distances between the frame elements, the walls may slightly bend inwards. In case of large temperature differences, some condensation may appear on the entrance doors or walls. 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

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

The warranty covers the functionality of the fittings, the quality of the material in contact with food, the floor and shelves, mechanical connections, and welds. Damages resulting from these cases are excluded from the warranty.

The manufacturer's warranty is limited only 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 corrosive substances, industrial pollution, chemicals, plant juices, stones, salt, etc.
- Minor geometric deviations that do not affect the quality of the plastic cellar or its components (e.g., slight deviations from the structural dimensions specified in this product passport for rotational molding due to the characteristics of rotational molding).



- Damage caused by natural disasters, fire, household factors, and other force majeure;
- Damage caused by third-party actions, including during delivery or installation of the product, carried out in violation of the assembly instructions for the plastic cellar;
- Damage and deformations of the product caused by changes in geometric dimensions that occurred after the completion of installation works and result from the product's design;
- Corrosion caused by scratches and damage to the paint coating of the frame, as well as various parts and connections.

The warranty becomes void if the product is repaired or tampered with by persons (companies) without prior consultation with the manufacturer.

Warranty period: 24 months.

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

Expected lifespan: at least 50 years.

Product Manufacturer

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