



Technical Specifications of the Product

Cellar 250

Natural Fridge®



Product Manufacturer BPR-PLASTECH LIMITED LIABILITY COMPANY, Poland, VAT PL9662114813

Tel.: +48 732 081 306 E-mail: nfridge24@gmail.com

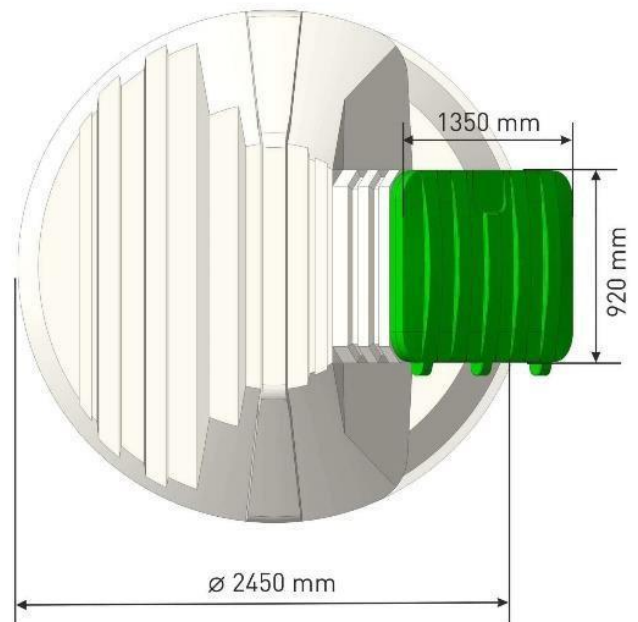
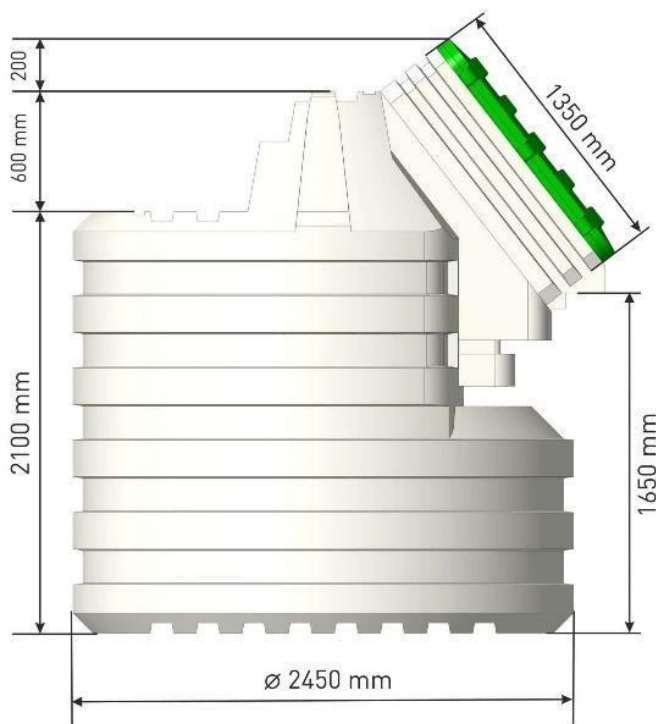
Website address: <https://ziemianka.com.pl/>

nfridge.eu



This technical card contains a description of the basic technical features of the Cellar 250 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 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 using rotational molding technology. It does not require additional sealing.



Diameter 245 cm

Volume 9 m³

Entrance dimensions 90 x 130 cm

Shelf area 5.1 m²

Height 270 cm

Weight 900 kg

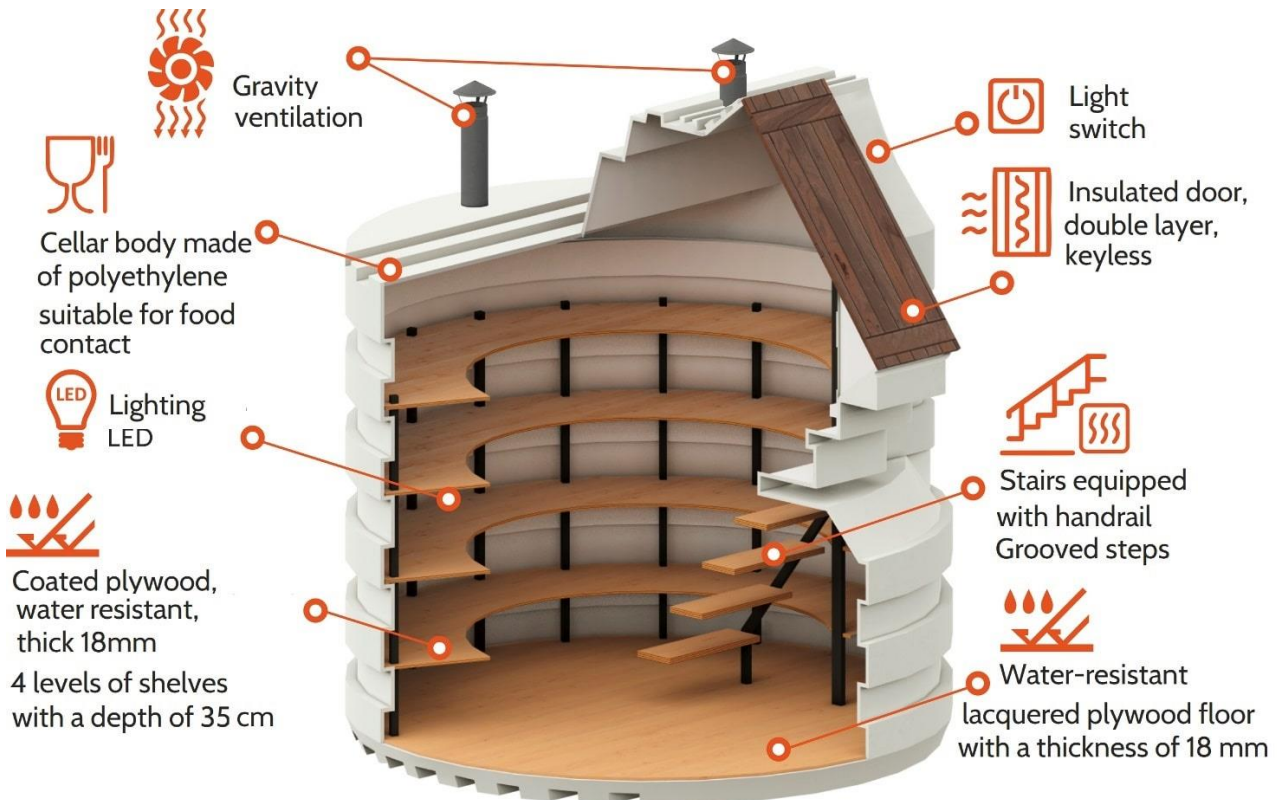
Shelf width 27-32 cm

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 piece
4. Supply ventilation - 1 piece
5. Exhaust ventilation - 1 piece
6. Double cover (flap) - 1 piece
7. LED Lighting - 1 pc,
8. Weather Station - 1 pc.





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 structure does not require additional sealing or protection against corrosion.

The lower part of the cellar should be buried at a depth of about 165 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 presence 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 Cellar 250:

- Semi-dry (dry) ready-mix concrete B15-B25, 4-5 m³.
- Reinforcement bars 10-12 mm, 30 m.
- Styrofoam for foundation insulation, 5 cm thick - 20-24 sheets.
- Underground cable 2x2.5mm² or 2x4mm² - from the cellar to the connection point of the power supply to the 220V network.
- It is recommended to use a 20mm diameter polyethylene pipe for the underground cable.
- Synthetic belts with a permissible load of 4 t and a length of 7 m - 2 pieces or steel cables in a polymer sheath with a minimum diameter of 12 mm and a minimum length of 7 m - 2 pieces.

Excavation Dimensions

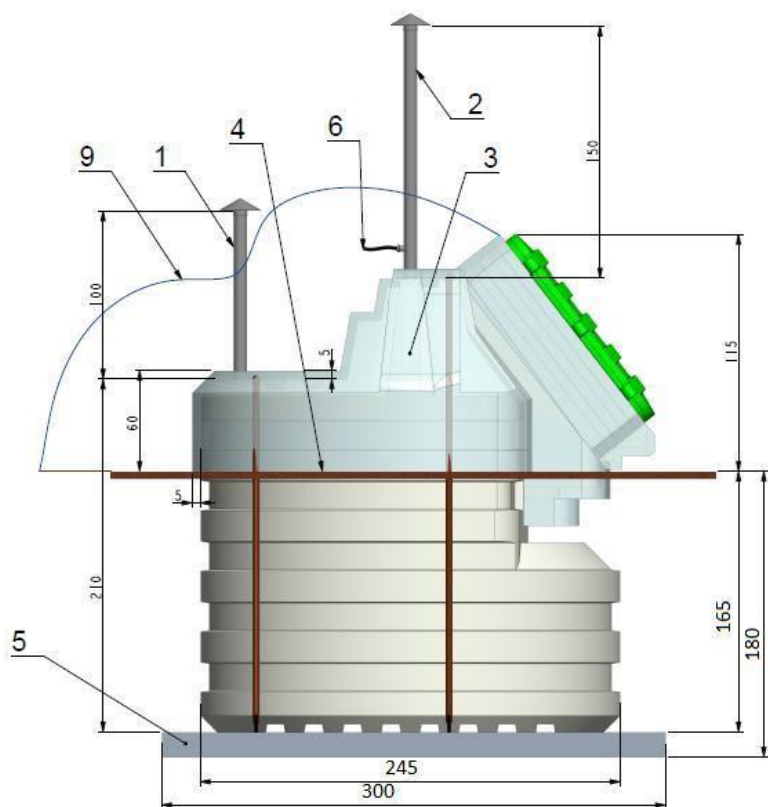
The excavation dimensions for installing the cellar should be 20 cm larger than its width and length around the entire perimeter - at least 270 x 270 cm at the bottom part. The depth of the excavation should be 175-180 cm, so that after placing the cellar on a concrete slab or dry concrete base, the lower edge of the hatch cover



is 5-10 cm above the ground level. This is to prevent rainwater or meltwater from getting into the interior of the cellar. The walls of the excavation should be vertical and maintain the correct dimensions throughout the height. This will greatly facilitate the construction of cellar walls with dry concrete.

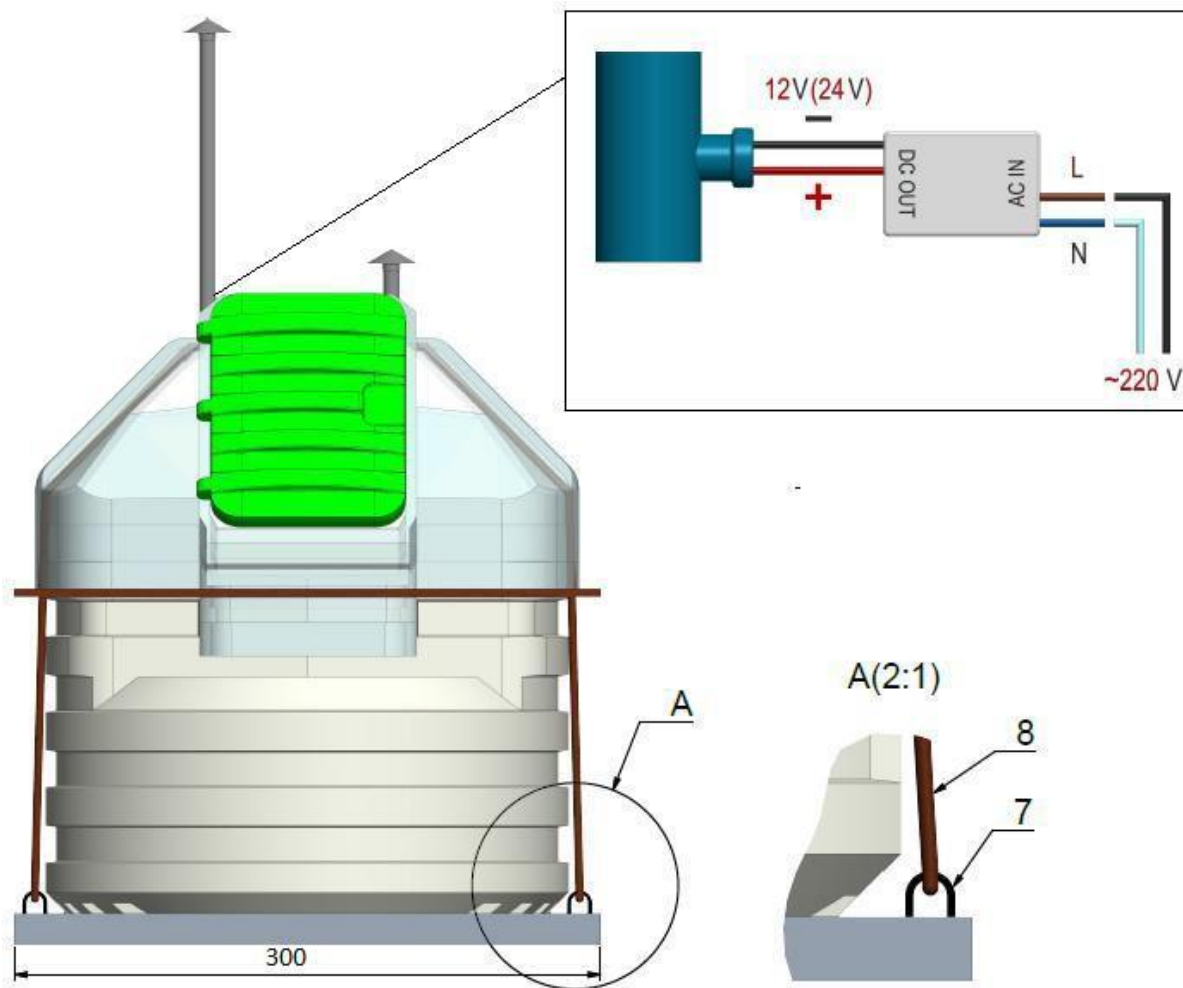
Installation

In sandy soils and at a low groundwater level (at least 1.5 m below the surface), it is permissible 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 270 x 270 cm and a thickness of 15 cm, containing handles for straps.



Diagram

1. Ventilation intake pipe
2. Ventilation outlet pipe
3. Insulation with styrofoam
4. Ground level
5. Concrete slab
6. LED Power Cables
7. Belt Handles
8. Belty
9. Mound of Earth



We set the cellar on a previously poured concrete slab at the bottom of the excavation and secure it using straps (not included in the equipment). The cellar should be centered on the concrete slab. Then we secure it to the slab using straps or rope and surround it on all sides with dry concrete. Each layer, 30-40 cm in height, should be moistened with water to allow the dry concrete to harden faster. The body of the cellar should be surrounded by dry concrete up 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 basement wall should be at least 20 cm.

Installation 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 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. Thermal insulation should be covered with geotextile.

Ventilation pipes must be extended by 50 cm above ground level for the supply



pipe (which delivers air to the lower part of the cellar) and 100-150 cm for the exhaust pipe (which removes air from the upper part of the cellar) and equipped with ventilation caps (they are included in the cellar kit).

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, do not use construction machinery 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 inward. 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 doors from the inside with insulating foam.

Warranty Conditions

During the warranty period, the buyer has the right to free repair of product defects resulting from manufacturing errors. The warranty covers fittings, food material quality, floors and shelves, mechanical and welded connections.

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 impacts, including corrosive substances, atmospheric effects, 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, caused by the characteristics of rotationally molded products);
- Damage caused by natural disasters, fires, domestic influences, and other force majeure;
- Damage caused by third-party actions, including during delivery or installation of the product, which violate the installation instructions of the plastic cellar;
- Damage and deformations of products caused by changes in geometric dimensions that occurred after the completion of installation works, as well as due to the product design;
- In case of corrosion caused by scratches and paint chips on the frame and various parts and connections.

The warranty expires if the product is repaired or serviced by persons (companies) without prior consultation with the manufacturer.

Warranty period: 24 months.

Warranty for certain components (weather station, LED lighting) is 1 year.

Expected lifespan: at least 50 years.

Product Manufacturer

BPR-PLASTECH LIMITED LIABILITY COMPANY

Company address: Konduktorska No. 18, suite 7, 02-775 Warsaw, Poland

Mailing address: ul. Bruzdowa 125 A /12, 02-991 Warsaw, Poland VAT ID: PL9662114813, REGON: 368194329, KRS: 0000693472

Tel.: +48 732 081 306 E-mail: nfridge24@gmail.com

Website address: naturalfridge.de ziemianka.com.pl garden-cellar.de nfridge.eu

© 2023

